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# AMERICAN BEE JOURNAL



JULY, 1928

MAY DISEASE CAUSED BY FERMENT  
—DR. L. LARDINOIS

HONEY ICE CREAM AND ICES  
—BETTY B.

BEEKEEPING AMONG THE ORANGE  
GROVES —WILLIAM G. HEWES

POLICIES AND PLANS OF LEAGUE  
FOR 1928 —C. L. CORKINS



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Comb foundation is made of sheets of wax pressed between metal mills, in exact reproduction of the base of bees' comb. The sheets are just right to fit the frames used in the hives.

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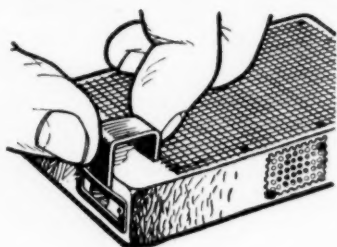
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### COMB HONEY SUPERS—10-FRAME

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*First Quality Italians*

Select untested 50c each, any number from 1 to 10,000. Tested \$1.00 each.

2 lb. package bees for late increase with young queens \$2.50 each.

*100% satisfaction or money back*

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WHEN YOU WANT IT**

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## Golden Queens

**Beautiful, gentle and  
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Select (one grade) young laying queen, \$1.00 each; five for \$4.00; ten or more, 75c each

We have Major's safe introducing cage, which is also self-introducing, in which we guarantee safe introduction. The price is 50c additional in this cage. All queens mailed in large six-hole cages unless smaller size preferred.

**No Disease. Health Certificate**

Safe arrival and satisfaction guaranteed

## The Golden Apiaries

LETOHATCHIE, ALABAMA

H. N. Major, Mgr.





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## Our Cover Picture

Every year more important work in beekeeping is reported from Russia. The Tiflis region is especially rich in experimental progress with bees, a most intensely interesting part of the great land of the Soviets. This picture is of split log hives near Batum in western Georgia. The entrances to the "hives" are at the ends of the logs. Queer relics, rapidly disappearing.

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Prompt Service  
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THREE BANDED QUEENS**

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One Selected Queen Bee Free with each order  
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Select Untested Queens:

65 cents each; 12 or more, 60c each; 100, \$55

Select Tested Queens:

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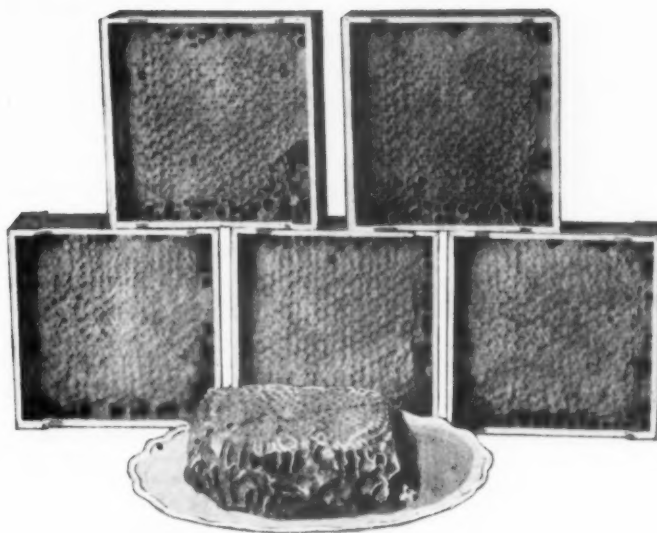
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*Dadant's Surplus Foundation — Choicest of Pure Beeswax.*

*Milled by experts who have studied its making for over fifty years.*

*Makes even, well-filled sections which grade high and sell quickly.*

*The Big Point in a Good Section of Comb Honey Is Its Appearance.*

Appearance will sell comb honey as fast as it is made but the honey must look good enough to eat.

And the heart of it is foundation! The fulness of the section, the evenness of the comb, the biting quality, that delicate center taste is in the foundation.

*Dadant's Surplus Foundation — Becomes Part of the Honey.*

*A delightfully edible part. Each sheet so dainty and clear.*

*So fragrant. A fit base on which to build the hive's best product.*

**Get Fancy Grades with Dadant's Surplus**

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Hamilton, Illinois

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Pails 5 lb. 12/c, 10 lb. 6/c and 5 gallon containers are in wood boxes, all other including all glass jars in heavy fibreboard cartons.

Very low prices on quantities CL or LCL. Write for free complete fall catalog.

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			Watertown	Sioux City	Lynchburg or Albany	Texarkana
K 63—Cans	24/c	2 1/2-lb.	\$1.05	\$1.10	\$1.10	\$1.20
K650—Cans	100/c	2 1/2-lb.	3.50	3.60	3.65	3.80
K650—Pails	12/c	5-lb.	1.05	1.05	1.10	1.15
K 65—Pails	50/c	5-lb.	3.15	3.20	3.25	3.35
K 66—Pails	6/c	10-lb.	.80	.85	.85	.90
K 69—Pails	50/c	10-lb.	4.55	4.70	4.80	5.05
K624—Cans	1/c	5-gal.	.60	.65	.65	.70
10 Cans	1/c	5-gal.	5.70	6.00	6.00	6.50
K626—Cans	2/c	5-gal.	1.05	1.10	1.10	1.15
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K646—2 1/2-lb. Cans	100 @ \$ 7.05	100 @ \$ 6.25	100 @ \$ 7.55
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# AMERICAN BEE JOURNAL

Vol. LXVIII—No. 7

Hamilton, Illinois, July, 1928

Monthly, \$1.00 a Year

## May Disease — Caused by a Ferment

By Dr. L. Lardinois

No. 2. (See June number, page 294)

WHEN I attribute the cause of May Disease to a ferment, classified among the saccharomyces, which infests the bee's body and is found as well in the nectar and in the honey as in the pollen, and consequently in the hive also, I do not express a revolutionary theory, intended to upset what we already know on diseases. On the contrary I aim to develop an idea which has been existing for a long time in the mind of many beekeepers. In fact, there are, among men, animals and, especially among insects, many examples of this sort of infestation. These infestations are called mycoses (from the Greek "mykes," mushroom), and in order to distinguish them from one another they are designated by the mushroom which produces them, so that, in order to conform to the rule, we should call the May disease "saccharomycosis." But I think that it is best to retain for the diverse diseases their com-

mon denominations, especially as these denominations are based upon exterior characters which are easily distinguished and have been thus known for a long time. However, it might be that several diseases of the bee are only morbid varieties due to a single cause, in which case we should, however, establish demarcations or limits between them to distinguish them from one another, if they belong to the same source.

It is worthy of notice that the different diseases in question are produced in a fairly regular chronological order, when they assume an epidemic character, as if a unique germ developed a special and variable virulence, in a manner depending upon the course of the seasons. However, during the period of summer activity, and whatever be the atmospheric conditions, one notices occasionally isolated cases of each of those diseases and even of brood diseases. Occasionally one may see a

larva or a nymph thrown out of the hive, or a worker suffering of May Disease, paralysis or dysentery. But such isolated cases do not influence the health of the colony, which continues to develop.

During the wintering, sickness may be revealed by an abnormal mortality easy to discover, since the dead bodies of the bees remain in the hive. This mortality is the more dangerous for the colony since there are no births at that time to make up for the losses. The queen herself, who is usually quite immune to infection, probably because of the choice food which is offered to her, does not always escape from the cases of mycosis, and some cases of queenlessness would be probably traced to this trouble if we could always find the dead body of a queen and examine it; but this rarely happens.

Among the atmospherical causes which enter in the development of May Disease, some are generally

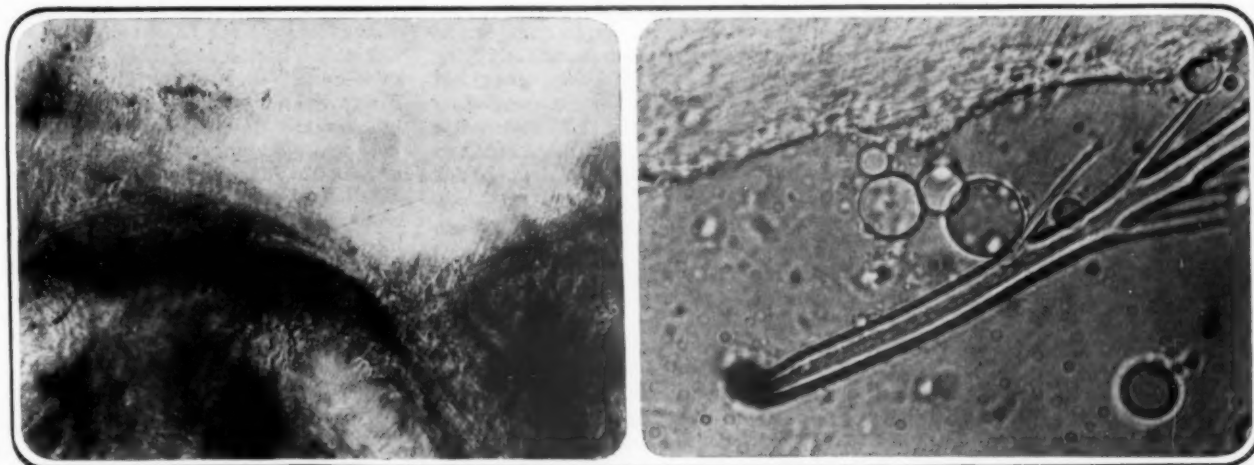


Fig. 1 (at left). This photo represents a microscopic preparation of the nervous centers obtained by rubbing. The dark parts are constituted by an abundant pink pigment in which one can recognize the very small spores of the pigment, colored by the pigment itself. These spores appear like small grains of gunpowder.

Fig. 2 (at right). This photo represents a hair. One can see the spores within the central tube. The mycose causes the decay of the hair, which falls. This explains why the abdomen of old diseased bees is usually shiny and hairless.



known. Late cold weather, north winds, sudden changes of temperature, and honey too watery or slightly fermented, which the bees have not been able to evaporate speedily. Other causes are less accessible to our senses, such as earth influences, electrical conditions of the atmosphere and of the sun and planets, conditions which the "astrologers" of the old days used for their "prognostications."

Intensive beekeeping, with its hives too large in winter, too small in summer, badly ventilated, and too frequent manipulations, with injudicious feeding, and other factors which may disturb the normal balance of the colony, weaken the organism of the workers in its resistance against aggressive attacks of infections.

It is well known that alcoholic fermentation of sweets increases in intensity during the hot weather, and that "*saccharomyces mycoderma*," the ferment of metheglin or mead, increases very much in activity at this time. Epidemic convulsions (probably paralysis—Editor), which few beekeepers notice, are not often seen, because many bees die far from the hive, until the colony becomes depopulated.

The germs of May disease, as I have stated in the previous article, come from the nectar and the pollen. There you will find the "*Dematium*" of Pasteur, with abundant spores, giving birth to yeasts and moulds, according to the milieu in which they find themselves.

In nitrous environments the spores do not go beyond the embryon form; they multiply abundantly and behave like bacteria. In winter it is in the hive itself where the ferments abound in unsealed stores and where moulds invade the walls of the non-occupied combs.

The fight between these ferments and the organisms of the honeybees causes in them wear, old age and finally death resulting from paralysis or convulsions. Aside from accidents, it is the bee's power of resistance against these ferments which cause her greater or lesser longevity. She necessarily takes within her digestive system a great quantity of impurities in which the *Dematium* occupies a leading place.

I cannot now enter into the description of the morbid process developed by the toxins, the pigments and the products of fermentation, such as alcohol and acetic acid, or the disorders that are found in the bee which are mainly narrowings or constrictions which incommode the action of the natural channels. In May disease one often finds a narrowing of the extremity of the rectal ampulla, which causes the retention of excrements with inevitable dire consequences.

In severe cases, the most striking

symptom is that mentioned by Vergil in a verse short and enlightening: *Aut illæ pedibus connexæ ad limina pendent* (hanging by their legs they remain suspended at the doors of their homes. *Georgics Lib. IV, 257.*) Old bees returning from the field hang for an instant at the entrance of their home. This is fatal to them, as the cold seizes them and they are chilled. Many are lost each day. Young bees also die due to a narrowing of their esophagus; they are unable to feed themselves; they leave the hive about the middle of the day, crawling on the ground, they die at some distance.

However, we must bear in mind that the presence of ferments in the digestive tube is a common thing. It could not be otherwise. Bees and ferment live in a sort of symbiosis or partnership of dissimilar things, so that there is hardly a colony that is free from them. Ferment is a messmate in the hive, due to the presence of sweets, but it is only when the insect weakens that the damage begins. The disease is thus caused by an increase of influence.

What then is the method employed by the bee organism to control the diverse ferments and prevent them from becoming noxious?

Experience proves that a sufficient quantity of formic acid prevents the morbid influences of microorganisms. So the acid secreted by the salivary glands of the bee is not only useful in helping the bee to invert the sugars of honey, but also to paralyze the infectious action of the germs existing in nectar and in pollen.

My theory, such as I explain it here, is far from perfection. Many things need developing. But I be-

lieve that, in its ensemble, it approximates the truth. The bacillus theory which has held till now has led to nothing; it has not brought any practical result. We need to take another direction. The study of the diverse ferments found in the hive will lead us to better results.

Indeed, the home of the honeybee needs to be ameliorated, as well as the methods of management, the study of her physiology and of her habits and the methods of feeding so often needed.

I fear that the method of feeding bees with diluted sugar, whether beet or cane sugar, is an error as great as that which would consist in giving a child sugar water in place of the milk of its mother, under the plea that milk contains sugar. Honey is the natural food of the bee. It contains, besides its proper sugars, mineral salts, nitrogenous substances, vegetable essences, all necessary to the sustenance of the bee. It contains also the acid necessary for the winter consumption of the colony. Therefore it would be advisable to add to the sugar syrup a few drops of formic acid, some forty drops to the gallon. This would help the bees to continue the inversion of the sugar syrup and would relieve them of a difficult task. Sea salt in a very small proportion would also supply some of the mineral salts necessary to their life. Thus prepared, sugar syrup would be less objectionable.

Queen-rearing should also be conducted with the view of eliminating the different diseases and rendering the bees more immune.

Thus our aim should be to follow a rational method of beekeeping rather than the use of drugs.

## What To Do With Honey-Dumpers

**H**ONEY-DUMPERS are to the beekeeping industry as fleas are to a dog. Neither contributes anything to the well-being of their hosts, but are rather a source of unending agony. Mark Twain said that a few fleas were good for a dog, but one cannot truthfully say as much for honey-dumpers.

Let's stop and see just why each is. The flea is as it is because it is earning its livelihood in the manner in which Nature intended that it should, and no one will deny that it is industrious. The honey-dumper is as he is because he is a victim of panic, or seller's colic, and the less said about his industry the better. We are familiar with the saying that "a little knowledge hath made him mad." We may use a paraphrase of this to describe the honey-dumper by saying that a little honey hath made him mad.

There are a number of reasons which account for the honey-dumper, but such beekeepers may be classified under three general headings: First, those beekeepers who, having but a small amount of honey to market, and that only sporadically, offer a good grade of honey at a price far below the cost of production. Second, those beekeepers who are like the first-named, except that they offer for sale such a slovenly prepared product as to arouse a prejudice against the use of honey as a food. Third, the producers of large crops of honey who for any one of various reasons dispose of their honey for an amount less than it cost them to produce it.

Beekeepers of the first two classes are the ones most frequently encountered, and are the most pernicious pests. They demoralize the local market, which is so essential



to the successful marketing of honey. The general market is nothing but a collection of local markets. Every time that one of these unit markets is weakened the whole structure is threatened.

A good honey crop is an unusual occurrence with a beekeeper of either of the first two classes. Not being a regular producer, he has no regular market and does not know what to do with a crop of honey even when he gets one. He does know of a neighbor, however, who is a commercial beekeeper, and he feels that in order to sell honey in the same locality as does this neighbor he must offer his honey at a lower price. Whether this is a result of timidity, a false sense of modesty, or sheer panic, it matters not, for the damage is done. He may offer as an excuse that he had to dispose of his honey before the demand dropped off at Thanksgiving time. How does he know that it drops off then? He never had honey that late in the season.

When the commercial honey producer, who, having the future in mind, has carefully prepared his honey for the market, starts to sell it, he finds that his customers have either bought from the honey-dumper or have learned of his low prices. At an increased selling expense he seeks another locality only to undergo a similar experience if the honeyflow has been general. He then is confronted with the choice of waiting for the demand to become normal or of selling his honey elsewhere at a ruinously low price. If he has to accept the latter alternative, then the effect of his act will be felt all along the line. It is a combination of just such instances that weakens a honey market.

I once had occasion to observe just such a happening. A man from another state called on me and after a pleasant conversation enquired about my honey prices. He said that he was going out to sell honey in my town for five cents a pound more than I was getting. "Go to it," said I, "and I wish there were more like you." He did go to it, and for three days did a good business. A year later he returned and, as before, called on me before starting out to sell. I told him that I had been able to sell but very little honey there that year and doubted if he could.

At the end of two days he came up to bid me good-bye, as his sales did not justify his remaining longer. During his two days' selling effort he had disposed of one five-pound pail. The reason? A honey-dumper had preceded him.

Honey is a food. It is a good food, and may profitably be used as such 365 days out of every year. There need be no such thing as a honey season. We never hear of a sugar season, and honey is a better food than sugar. Neither would we have such a thing as a honey season if Mrs. Housewife didn't know that she could drive out to the honey-dumper's "at any time before Thanksgiving" and buy her honey for 10 cents a pound.

The less said about the man who markets a slovenly prepared product the better. He has all of the faults and weaknesses of the first-named honey-dumper, with a serious fault added of marketing a poor product.

The honey market is not like the shoe market. We generally wear shoes every day in the year and, consequently, consider them as one of the necessities of life. We are obliged to accept more tampering with necessities than otherwise. Just because we happen to buy a poor pair of shoes it does not follow that as a result of this experience we will forego wearing shoes. With honey, however, it is another story. A slovenly prepared product may prejudice the buyer for life against honey. This in itself is regrettable. For every consumer lost a new one must be found, else, according to the law of supply and demand, down will go the price of honey. Of course, here again it takes more than an individual case to bring about this result, but, unfortunately, we are plentifully supplied with instances of this nature.

The honey-dumper of the third class is often forced to become such. He knows the danger of underselling and under ordinary circumstances would not be guilty of such a practice.

The reasons are many why he does sell at a price below his cost of production, and they are so numerous that they could not be considered here. Perhaps he has incurred financial obligations which must be met regardless of the effect it has upon himself. Perhaps it has been a good honey year in general and there have been a lot of honey-dumpers. Perhaps he has a large crop to handle and for any one of many reasons his usual market has failed him. For such a man we can have nothing but sympathy and extend to him our best wishes for the future. He can plead that he is a honey-dumper only in self-defense.

What to do with the honey-dumpers of the first two classes is a problem. Fleas on a dog offer a much simpler situation. We can kill them by using insect powder. Our laws, however, are too lenient towards malefactors to permit of our using this method to rid the honey industry of its honey-dumpers.

What is left to do? Let's get them into organizations. Whether they own one colony or a hundred, they can become interested in better beekeeping as soon as they actively affiliate themselves with an organization intended to further the interests of beekeeping.

Their status as beekeepers will be changed. Being members of a beekeepers' organization will appeal to their pride as well as to their interest. They will learn that they can market their honey for the same price as does the commercial producer and that there is room for all. Furthermore, they may discover some new customers, and each new customer lessens the supply and increases the demand, which, of course, means a better price.

The slovenly man can learn to put up his honey in neat containers, and even if but two beekeepers agree to market their product at a price which will give them a fair return over the price of production, then a start on the right road will be made.

That man who keeps but one or two colonies of bees under an apple tree in the corner of his orchard can hardly visualize himself as being a beekeeper. However, when this same man becomes a member of a beekeepers' organization, those hitherto neglected colonies take on a new meaning for him. They are concrete evidences that he is a beekeeper, and, as such, should feel called upon to do everything in his power to promote the well-being of the industry of which he may be but a minor unit.

## The Honeybee

By Bryan Smith

A little Oklahoma boy handed in the following composition on the honeybee:

"Bees are just little honey bugs. They have a sweet disposition when let alone, and are busy all the time that no one is around. When you go up near the hive they will quit work and sit down on your face, neck, or in your hair. Sometimes they will sit down on you so hard that the place will stay swelled up for a week.

"Bees are very thrifty, for they often live in hollow trees until they are able to live in a modern hive.

"Honeybees seem to like a monarchical form of government best."





Established by Samuel Wagner in 1861

The oldest Bee Journal in the English language. Published monthly at Hamilton, Illinois. Copyright 1928 by C. P. Dadant

Entered as second-class matter at the Postoffice at Hamilton, Illinois.  
C. P. Dadant, Editor; Frank C. Pellett, Associate Editor.  
Maurice G. Dadant, Business Manager

#### SUBSCRIPTION RATES:

In the United States, Canada and Mexico, \$1.00 per year; three years, \$2.50. Other foreign countries, postage 25 cents extra per year. All subscriptions are stopped at expiration. Date of expiration is printed on wrapper label.

## Summer Conditions in the Apiary

In the summer we have both the possibility of prolonged crop or of drouth and honey shortage. Sometimes, after a very heavy crop, the yield ceases suddenly and the handling of the colonies by the apiarist becomes difficult, both from the less peaceable behavior of the workers and the tendency to robbing which is sometimes promptly developed among some races, especially those that have had Cyprian blood in their ancestors.

The change from a positive indifference to honey already harvested, when the crop is heavy, to a furore of robbing when it stops, is sometimes almost incredible. I remember forgetting an open case of comb honey on the top of a hive for twenty-four hours without a single bee paying attention to it. Then, after a heavy rain, an excitement in the entire apiary, caused by a weak colony being robbed, all this within two days.

When there is a tendency to rob and the weather is hot, as is often the case in July, a great deal of discernment must be exercised by the apiarist, for he cannot reduce the entrances much without depriving the bees of the needed ventilation, and yet he cannot, without danger, leave the hives too open. One thing which a beekeeper will consider indispensable in such a circumstance, is to replace fully on the hive body the supers that have been "staggered" or set back or forward a half inch or more to provide a current of air. If this is not done, the bees will move the honey away from these passages in order to be able to protect their crop.

When we handle bees, especially weak colonies, in hot weather, at a time when the crop has stopped and there is danger of robbing, we make it a practice to throw over the entrance a little fine grass. The bees of the hive locate themselves in this grass and successfully protect the entrance temporarily from robbers. The grass is usually brushed away by the workers in an hour or so.

## May Disease

Although this name is not scientific, most beekeepers know what it means. May Disease, Mal de Mai, Mal di Maggio, Maikrenkheit, paralysis, constipation—these names, used in different countries, all indicate the same trouble. The disease belongs to the adult bee, beginning usually in the early spring and lasting sometimes through the entire season. The sick bees cannot discharge their abdomen, they carry a load of putrid matter, they lose their hairs, they drag themselves about often going quite far from the hive before dying.

None of our latest discoveries apply to it. It shows neither *Nosema apis* nor the *Acarapis* or *Tarsonemus*, which has been found so harmful in some sections. Yet it exists at times all over the beekeeping world. Our two old friends, O. O. Poppleton, of Florida, and Major Merriam, of south California, two great honey producers, both now deceased, found it at the same date, in their apiaries, and both wrote me at the same time, accusing different plants of causing the trouble. At the

same date the same disease was making ravages among the bees of the Province of Ancona, Italy. I have often seen it here, but never in very great intensity.

I have always been under the impression that the food of the bees was causing the trouble in question. Lately, I read descriptions from Dr. Lardinois, of Belgium in the *Rucher Belge*. I was struck particularly by the statement which he made that the ferments causing May Disease brought about the "narrowing of the rectal ampulla," or, in other words, prevented the discharges from the abdomen of the honeybee. This led me to believe that he is right in charging May disease to fermenting food.

I urge our readers to take particular notice of the articles by this writer on page 294 of our June number and in the July number. I believe there is something worth while in them.

## Did You See It?

Again we wish to call our readers' attention to the article which appeared in our May issue, page 225, giving a report of the newly formed "Bee Industries Association."

One of our staff correspondents attending the meetings advises that apparently beekeepers have not taken cognizance of this article or similar ones which appeared in the entire beekeeping press of the United States.

It is sufficiently important that we believe every reader should refer back to the May issue and read this article, so as to be posted on the possibilities of this new association.

Dr. Barnard is progressing satisfactorily with the work and will have something to report in succeeding issues of the *American Bee Journal* and of the other bee publications.

## Ripe Honey

We all know that honey should be well ripened before it is extracted. However, many people believe that it is sure to be ripe if it is sealed and green if not sealed. This is often an error in both cases. In very moist weather, when the bees are harvesting very watery honey very fast, it often happens that it is not yet ripe when they seal it. The reason is that the cells have been filled very quickly with very thin honey and the heavy crop has caused a large production of wax. It is quite natural, then, that the bees should seal the filled cells. We have seen this happen oftenest during the bloom of basswood. On the other hand, if the honey is fairly thick at the time of harvest, it may remain a week or more before being sealed and will then be quite ripe.

So the ripeness of honey is not to be judged always by its being, or not, sealed. It requires examination on the part of the apiarist. Usually the conditions of the harvest tell us, before examination, whether we may expect the honey to be ripe shortly after it has been gathered.

Unripe honey, if extracted, will granulate unevenly, if at all. Some of the granulations will be very coarse, but there will be liquid portions between the solid parts. The only way to bring this honey to normal condition is to melt it. If it is not overheated, coarse granulated honey will usually granulate in a soft, regular grain, at the second granulation. If it has been heated above 145 degrees, it will not be likely to granulate again.



## Watch For Disease

We take it for granted that our beekeepers keep their eyes open for possible foulbrood in their apiaries. Some thirty years ago we did not have to do it, for foulbrood was very scarce, except in spots where it had been existing for a long time. But with the present immense shipping of bees and honey throughout the world there is much more danger of the spreading of diseases. Beekeeping is not more unfortunate in such a matter than other agricultural pursuits, for, owing to the greater cultivation of all sorts of products, we see more codling moth in the orchards, more black rot in the vineyards, more weevil in the cotton, etc. It requires more careful management to achieve results.

In some parts of our territory, where foulbrood does not exist in a serious proportion, the beekeepers consider it advisable to destroy the colonies containing the disease, by burning. They criticize those who treat the hives as being very much to blame. But if they found their entire apiaries contaminated they would probably hesitate before destroying every colony when there are methods of cure which have been successful for centuries.

However, whatever you decide to do, if you find the disease among your colonies be thorough about it. Half measures will not do. Treat the colonies with the utmost care and keep an eye on them. Visit the apiaries of your neighbors and warn them. If necessary, help them to treat their diseased colonies. It is during the summer, at the time of the honey crop, that the cure is most successful. The treatment recommended by A. G. Schirach, in his "Natural History of the Queenbee," in 1771, or 157 years ago, is still considered as the best for the cure of the disease. We have more knowledge of the details and can succeed better than ever, but it requires exceeding care and a watchfulness of all the conditions. Bear in mind especially that it does not matter how careful you be if some neighbor has the disease in his apiary and does not know it, for it will be returned to you, by the activity of your bees, through robbing.

If you find suspicious circumstances do not hesitate. When any dead brood is found it is most advisable either to call your state inspector, if there is one in your state, or to send a sample of the suspected disease to the apiarist in charge at the Bureau of Entomology of Washington, Mr. James I. Hambleton. Mr. Hambleton is a most accommodating and reliable man. He is there for our benefit and is always ready to render service to the beekeepers of the country. He has an able corps of assistants and they are very prompt in replying to questions. But do not make matters difficult for them by careless packing of your samples, by writing your letters at random and with a pencil, so that they are sometimes illegible. Be thorough and careful.

When you have disease in your apiary, do not hesitate to follow the instructions of those who know what to do. There is no doubt about success in curing disease if it is done properly, and, I repeat it, summer, during a honey crop, is the best time to cure disease.

In 1907 we found a large amount of disease in our apiaries. We treated it, cured it, and had good crops right after. In 1916 we harvested our largest crop, 125,000 pounds of honey. But we have to keep watching, for many other beekeepers are careless and either fail to discover disease or fail to cure it for lack of thoroughness.

## The Changing World

In reading over the old bee magazines one is impressed with the amount of material dealing with bee behavior. Langstroth, Root, Charles Dadant and Doolittle devoted much space to discussion of how and why bees did thus and so. Writers of today devote their attention primarily to questions of production and marketing.

The same changes are apparent in other agricultural

enterprises. In the old days communication was difficult and transportation was slow. Aside from his business, every wide-awake individual held some outside interest to which he devoted his leisure time. In those unhurried days papers were read from cover to cover, including the advertisements. Not only were the papers read, but their contents were fully digested. Now all is changed. We are much hurried to get through the day's work and be off for a dinner at some distant point, or perhaps we go to a movie or a concert. If we remain at home we turn on the radio.

Investigations are made in this day by men whose business it is to make them. They are connected with scientific institutions with every facility with which to work and with nothing else to do. The information gathered under present day conditions is more exact, perhaps, but much beekeeping progress was made by our forefathers, who had to learn as they worked for their daily bread. The beekeeper of the old days had a wonderful fund of information concerning every living thing from muskrats and flying squirrels to bumblebees and wild flowers. The naturalist of the old type is very nearly an extinct species.

## Good Honey Locations

We are every day learning something new, whether in beekeeping or in other pursuits. We used to think that the great northern countries could not produce honey. Some twenty years ago we took a trip through the Canadian Rockies, stopping at Winnipeg on the way. We did not hear of any bees and thought that country was too far north for honey production. But with the growing of sweet clover we find that country a bee paradise. Someone wrote us not long ago that he was keeping bees as far north as anyone had ever done so, at the fifty-fifth degree. Then we looked over our maps and found that nearly all of Scotland is north of the fifty-fifth degree and that the Experimental Station of Tula, Russia, where they are making some wonderful experiments in beekeeping, is close to the fifty-fourth degree.

A very important point for beekeepers is to have good honey-producing flora. This may be improved very much by careful selection of forage plants. If your locality is not of the best for honey, study the flora and try to improve it. You will only be doing what they have done so successfully in the northern provinces and in our northern states.

One of our beekeepers, from Oregon, is moving fifteen colonies of bees to Hope, Alaska, northeast of the Aleutian Islands, at the sixty-first degree. We will be glad to hear how he succeeds.

## Honey and Maple Sugar

The French Bee Journal of Quebec, "L'Abeille," is changing its title to "L'Abeille and L'Erable" (The Bee and the Maple), and announces that hereafter the magazine will give help to the makers of maple sugar, as that industry is very large in the Province of Quebec, the makers of maple sugar numbering more than 20,000 in the province. L'Abeille has always been a very fine publication and we have no doubt that it will become more and more useful. The editor, Vaillancourt, is in charge of both beekeeping and maple sugar at the Ministry of Agriculture.

## South Carolina

We have just been informed that the withdrawal of the extension work of the U. S. Department of Agriculture in South Carolina beekeeping, which has been announced, is not to be effected and that our old friend, E. S. Prevost, will still be in charge. So he writes us from Clemson College, which has been his headquarters. He will continue the work just as before.



## Honey Ice Creams and Ices

By Betty B.

WELL, better days are ahead for the beekeeping fraternity. At least so it would appear. Whether it is to be through this new American Honey Institute, the American Honey Producers' League or some new-fangled grouping of honey prices, crops and sales I do not know; but better days must certainly be coming. How do I know? Well, because my John had his fortune told the other day, and the besplattered, bespangled lady told him he is shortly to become a **multi-millionaire**, and as her languid black eyes took in our outfit and John's bee lot, she added, "They, they bring gold, much gold, ah, very much gold."

It all happened in this way. John the boys and I were all out in the back lot nailing up our annual allotment of new hives—we get a bunch of new ones each season in the enthusiasm of the clover flow—and the girls were just handing around milkshakes (we always stop during the warm weather for a sip of something cooling about the middle of the afternoon), when up the drive ambled the ricketiest old car I have ever seen, and out of it bubbled half a dozen ragged, half-clad youngsters, two or three dogs and a man and woman, a typical gypsy outfit, minus the antiquated horses and the mysterious covered wagon of childhood's thrilling days. "Tella fortune," the woman insisted. We shook our heads. Then the sight of our own youngsters sipping their milkshake and the appealing, pathetic hunger of the round-eyed little visitors was too much for either John or me, and we passed around the foaming, cooling liquid. It did my heart good to see them drink, for, after all, they were but children like my own, save a difference of environment. I was indeed glad the girls had as usual made more than we really needed.

The result was the fortunes of the family were all glibly and gorgeously told, without even the "crossed palm" or the silver coins. I was uncharitable enough to wonder about our henhouse that night, but so far not a biddy has been disturbed. Now, since my John could never in all the wide world be anything but a beekeeper, and neither of us has a relative on earth who is likely to ever leave us five cents, all this wealth of "gold" must be coming from the bee business! So it is up to the new Honey Institute or the League or something to bring John's fortune to pass, and if John gets to be a multi-millionaire out of his bees, I am sure the rest of you will also.

Now, since some of you may want to help bait good fortune, let me give you our honey milk shake recipe.

From the time our babies begin to shift for themselves in the food line, I have given to them some sort of egg-milk combination each afternoon. Later, as they grew older and our farm work became heavier, John and I joined them in some sort of light refreshment during the heat of the summer afternoons. Since all of these contain honey, I pass them on to you.

EGGNOG is a complete and perfectly nourishing food in itself, and when deliciously cool is invigorating and alluring. Since I have no milk shaker, we use an extra large glass jar with screw cap. To the proportions of one pint sweet milk, one egg well beaten, one cupful of chipped ice and one-fourth cup of liquid honey, a dash of nutmeg or one-half teaspoonful of vanilla (if desired), we place these ingredients in the jar and shake vigorously, serving when the ice is well melted.

HONEY LEMONADE. Without doubt lemons are one of the very finest of fruits from a health standard that we have. When served with sugar they are ruined as a health drink; but served with honey, the flavor is far superior and the beverage ideal. Lemons tone up the system, give it the proper amount of acid and are cooling and satisfying. In making honey lemonade use about the same amount of honey as you would of sugar.

HONEY DELIGHT. To the proportions of the juice of two lemons, one orange, one cup crushed red raspberries or one cup crushed pineapple, use four tablespoonfuls of honey and four cups of ice water. Chill and serve.

HONEY PUNCH. To the juice of two lemons and two oranges add one cup seeded cherries, one pineapple cut in small pieces, three bananas sliced very thin, one cup grape juice, one-half cup honey, one cup chopped ice and three cups water. Chill and serve very cold.

MINT CUP. My Uncle Thad, who hails from Kentucky, proposed this variation to us last summer, and since I suppose it is suggestive of days gone by it seems to meet with especial favor with our men folk. Crush a dozen sprays of mint and place in a pitcher with one pint of cracked ice. To this add one pint grape juice, the juice of three lemons and one-fourth cup honey which has previously been dissolved in one pint of ice water.

FRUIT-HONEY ICES. As the temperature rises, if you would have better health, by all means discard meats, starches and sugars, and join the vegetable-fruit crusade. The following fruit-honey ices are cooling,

delicious, health-giving, economical, and easily prepared:

LEMON ICE. Dissolve three-fourths cup of honey in four cups of water and add two cups strained lemon juice and one-fourth teaspoonful salt. Place in the ice cream freezer, using eight parts of finely chopped ice to one part coarse salt. Turn crank slowly at first, then briskly. When frozen, remove dasher, pack solidly into the can, re-ice, and leave in cool place until time to serve.

PINEAPPLE ICE. To one-half cup lemon juice and one can crushed pineapple add one-fourth cup honey dissolved in one cup water. Freeze as above and pack.

HONEY MOUSSE. Beat four eggs slightly and slowly pour over them one cup hot, light-colored, mild honey. Cook until the mixture thickens. Cool and add one pint of cream whipped. Put mixture into a mold, pack in salt and ice and let stand to "ripen" three or four hours.

HONEY ICE CREAMS. With us no celebration is quite complete without honey ice cream. First, our "real ice cream," as Bobby calls it, we use for "state occasions," and, although very rich, it is most delicious and alluring. Sweeten to taste with your best flavored honey about three pints of rich, sweet cream, pour into freezer, and freeze as for other creams, pack and "let ripen" an hour or more. Serve with the "white honey cake" described in our last issue.

MOTHER'S ICE CREAM is our family standard. Scald in double boiler one pint sweet milk and to it add the well-beaten yolks of two eggs and one-fourth cup of flour carefully blended with one-half cup of cold milk. Cook until thick. Then when slightly cool add one cup of honey and chill. About one hour before we need to serve this we add to the above custard the two egg whites beaten very stiff, one pint of cream, two teaspoonfuls of vanilla or almond, and a little more honey, if desired. Stir carefully, pour into freezer, freeze, pack and serve. To make chocolate ice cream we add to the warm milk two squares of chocolate or one-half cup cocoa. Sometimes before freezing we add chopped bananas, strawberries, or red raspberries. Sometimes to vary it when serving we drizzle over each helping a tablespoonful of liquid honey, and occasionally we make it into a "chocolate sundae" by mixing dry cocoa with the honey. The children are especially fond of it this way.

### Beekeeping in Illinois

Illinois beekeepers, through their local county association, have been especially active during the first half



of 1928. Several new organizations have been formed or somewhat inactive associations revived. The Shelby County Association, the most recently organized, has probably shown the most enthusiasm with three meetings under the assistance of the State Inspection Division. The Cook-Du Page County Association will have held at least three meetings by July 1. Other counties with one or more meetings to their credit are: Jo Davies, Woodford, Grundy, Williamson, Will, Ogle-Lee, De Kalb, Kane, Iroquois, McHenry, Richland, Fulton, Montgomery, Mercer, Henry, and Rock Island. The latter three counties held meetings on June 21-23 as a part of a series which had as the principal speakers Mr. H. C. Dadant of Hamilton, Illinois, and A. L. Kildow, Chief Inspector of Apiaries.

In addition to the annual tour under the auspices of the State Apiary Inspection Division and the Illinois State Beekeepers' Association, many other counties are planning on fall picnics and field meetings.

A beekeepers' reunion, to include beekeepers from Lee, Ogle, Boone, Kane and DeKalb counties, is planned to be held at DeKalb about the second week in August. Other counties contemplating holding meetings are Warren, Whiteside, Jefferson and Jersey.

### Enumeration of Colonies of Bees

If we are to have any census taken in 1930, there should be a question in every kind of census blanks asking the number of the colonies of bees kept by the person, with another question as to the value of the products therefrom.

The reason why the census bureau places the question in a part of the blank and not in others can probably be explained by the fact that it is following the old form of blanks used years ago, when the mode of locomotion was much slower and the persons on farms were the only ones who kept bees. Those in the town or villages were not in possession of bees as they are at the present time. With automobiles now, the bees can be kept in the country where they can obtain more nectar. This was not so years ago. An accurate return is necessary to show the magnitude of this industry, and all blanks should contain the questions and then a full return would be made.

I implore the beekeepers in all locations to write to Secretary Herbert Hoover and Secretary William M. Jardine of Washington, D. C., requesting an accurate enumeration of the number of colonies of bees and, so far as possible, the amount of honey and wax received therefrom.

T. E. Babcock, Conn.

## The Backyard Beekeeper

By Josephine Di Lullo

A DETOUR has been defined as the roughest distance between two driven points, and the highway to commercial success is crossed and paralleled in all directions with all sorts of detours, some of which are smooth and direct, some of which are rough and involved, and some of which are simply blind alleys leading nowhere but to disappointment.

Beekeeping is a road which attracts many persons, and if one has the skill and patience to follow it, it proves very satisfactory in the end, but the inexperienced person, who is afflicted with overconfidence, will meet not only disaster for himself, but prove a barrier to the progress of those near him.

Irresponsible writers rush into print with misinformation concerning the industry and alleged instances of persons, usually frail women or invalid men, who have caught a stray swarm of bees and from this humble beginning have amassed a fortune.

The head of one firm of bee shippers did catch a stray swarm of bees and then went to the university and took a post-graduate course and learned what to do with them, and from this small beginning has built up a business which keeps himself and partner and a loyal coterie of employees busy enough to be happy. But most people catch, or buy, a swarm or two, spend a few dollars for a hive and frames, or else hunt up a soap box and two small sticks and sit down to dream of wealth. Their chief interest lies in "robbing."

If there should be any frames of honey, these are proudly removed and not replaced, and the hive becomes, under favorable circumstances, a mass of criss-cross comb and an ideal place for disease.

The result is that a few months later it is found that "the moths have destroyed the bees," and the project goes on the rocks.

Meanwhile, the bees from the commercial apiary one block or three miles away have found these unprotected cells of honey and have industriously carried home death and destruction to their own hives.

Sometimes a man manages to get together a dozen or even fifty or a hundred stands of bees. He has put quite a little money, in small dribbles, and hours of time into them, and they have arrived at the stage where they can no longer be a spare time amusement; there are not enough of them to give a living for a family, and the wage-earner cannot afford to give up his regular employment, neither can he take proper care of them, and they speedily become a

loss to him and a menace to the community.

If they are in standard hives, and not too badly diseased, some neighboring apiarist will probably pay him a reasonable sum for the equipment; in very rare cases will he get back the actual money he has laid out, and never even nominal pay for the time invested.

If he produces any honey, he usually cuts out the combs and sells chunk honey at a price which ruins the local market, or he crushes the combs and strains them in some primitive method, which is not only illegal but highly objectionable as well, and has a little of a low grade product.

The fact is, beekeeping is a specialized and scientific avocation, and while there is no valid objection to any person taking it up, and the more fully it is understood the better, yet one should be sure, before he begins, that he really wants to engage in it.

The man who drew the elephant at the raffle was no more at a loss than the novice who finds himself with a good sized apiary on his hands.

The professional apiarists have constant calls from would-be beekeepers to sell a hive or two of bees, and he who is wise will give his friend a frame of honey and advise him to try goldfish instead of golden bees, for there is as much money for the uninformed amateur, and less of a menace to the public.

The orchardist who feels that he needs bees to pollinate his fruit (and they all do) should bear in mind that he can always find a professional beekeeper glad to make arrangements which are mutually satisfactory, and the shoemaker will do best to stick to his last.

California has at last taken cognizance of the fact that the welfare of the fruit industry is very closely allied with beekeeping, and the responsibility for its welfare rests on the horticultural commissioner's shoulders. He is setting to work systematically to put the business on a firm and safe foundation, and to this end the days of the soap box and the nail keg hive are no more.

The objection is raised that the new law puts the little man out of business, and perhaps it is true, but if it is true the man who is put out by the law is the one who would have gone out automatically anyhow, and his end is made painless, not only to him but to the man who is really in earnest; therefore it is a protection to the careful backyard beekeeper as well as the professional apiarist.

California.



# The Biological Influence of Ultra-Violet Radiation on the Bees

By D. eng. Janos Stitz, Chemist of the Royal Hungarian Agricultural Experiment Station, Pecs, Hungary, and Dr. Margit Beyer, Assistant of the Rontgen Laboratory of the University, Pecs, Hungary

ONE has observed the various influences of the rays of the sun on living organisms since millennium. Also, in the evolution of physics and other sciences, one finds always new appearances which are produced through the sunbeams. Therapy has meddled for a long time with the wholesome effect of the sunlight, but one is only gradually coming to the maintenance of what is strictly healthy in the same.

If the rays of the sun are decomposed with a glass prism, the spectrum is obtained. But in this spectrum are only the rays with wave lengths between 400-800 and not visible to the human eye. If a quartz prism is used instead of a glass prism, and the effect observed on a photographic plate, the spectrum appears longer in the direction of red rays than in the direction of dark violet-blue rays. They call these also ultra-red and ultra-violet rays. Experiments have established that the health of the sunlight is derived from the ultra-violet rays. The wave length of these rays is under 320/.

The quantity of these ultra-violet rays in the sunbeam is very small, and this led to the tendency to produce in large quantities and artificially, using Wolfram spirals, charcoal-bowlamp and finally the most perfect form, the quicksilverdamp-quartzlamp. That is Dr. Kuch's invention (1906.) In this the quantity of ultra-violet rays is very large be-

were equally strong, sound, similar in number of bees, and the management is the same.

We made previous investigations of other bees. After the radiation we found general good health, that one perceived through an easy hum. During the radiation the bees came forward from the honey combs as if the time were mid-day, when the sunshine is good and warm.

The length of our chief investigations was three weeks. The radiation was more and more intensive. One radiates singly each honeycomb and compares it with the other not radiated honeycombs of the other stock of bees, otherwise totally equal. The result is excellent. Next day after the radiation there was perceivable in the radiated bees the stimulated vital power, through their quick come and go. The radiated bees build from two and a half to one greater quantity of honeycombs than the not radiated bees. But the influence of ultra-violet rays is most visible in the evolution of larvæ. The development was so stimulated that we obtained perfectly matured bees two days earlier. And when the radiation is very long and intensive, as was the case in the last experiment of the chief investigations, the bees act sooner. They are completely evolutionized. The life of these individuals is very short. The data of the chief investigations are in the table.

Exp.	Date	Time of Radiation	Distance of the lamp	Temp. C.	Note
1	Oct. 16, 1926	5 min.	100 cm.	22-27°	a./
2	Oct. 23	7 min.	100 cm.	27-32°	b./
3	Oct. 25	9 min.	100 cm.	32°	c./
4	Oct. 31	15 min.	100 cm.	34°	d./
5	Nov. 2	20 min.	80 cm.	37°	e./

Notes—*a.* Universal good health. *b.* Stimulated building of honeycombs and as *a.* *c.* As *a-b.* *d.* Shortening of the development, and as *a-c.* *e.* Exaggeration of the radiation. Earliness of the evolution. Toward the end they are nervous.

cause the quicksilver poles are included in quartz, and quartz has the strange property, unlike glass, of not absorbing the ultra-violet rays.

The effect of ultra-violet radiation on bees has not till now been studied. (Since this was reported, in 1906, experiments have been made to determine the effect of ultra-violet and infra-red light on queens, by Mr. Clifford Muth, collaborating with Mr. Balinkin of the University of Cincinnati, and reported in the "Beekeepers' Item." We have taken into our experiments two stocks of bees. Both

Radiation was produced in a box of wire net, constructed for this purpose (Fig. 1-3), and with a quicksilverdamp-quartzlamp of Hannau.

## Summary

We are of the opinion that the influence of ultra-violet radiation is favorable to the various life appearances of the bees. But one must test its theoretical worth also with the sunlight, because the apiarists do not have at their disposal the expensive quicksilverdamp-quartzlamp.

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## Honey From the Linden

By N. Tourneur

Many who do know what qualities are requisite in a honey of supreme reputation unhesitatingly give judgment in favor of honey from the lime, or linden, tree; and, in particular, for the product from the blossoms of the lime-tree forests of Ukraine and Moldavia, or that going to make the far-famed "rosoglio" of Italian dealers. And certainly on some points it is not to be surpassed by any other in Europe, and by very few from overseas which the writer of this has so far encountered.

The flowers of the linden are remarkably rich in nectar and yield a honey surpassing all others in delicacy. Selling in Europe at four to five times the price of common honey, its worth is told in its cost.

The low countries and parts of mid-Europe much favor the lime tree, whether it be the "small-leaved" variety or the broad-leaved, the "cut-leaved," the "red-twigged" or the "golden-twigged," or the so-called "hairy-styled." America has the "thin-leaved," "loose-flowered," and other varieties. But it is in Lithuania, Galicia, Moldavia, the Ukraine, and throughout the Bucovin and Sirmien areas that honey from the lime tree forests is got at its finest. They that have smelt for the first time the fragrance of a linden forest on flower during July and August do not easily forget their first smack of it. There is nothing comparable to it. The far-famed savor of a bean field in blossom, or of the violet farms of Crasse early in the morning or a little after sundown, is not comparable to the nectared sensuousness of a forest of blossoming lindens. And in Lithuania and Moldavia and the Ukraine all advantage is taken of it, particularly in Lithuania, "the land of beehives," as a German journalist has recently called it, and with a close approach to the truth. In Lithuania and Moldavia, honey yet holds the place it once held elsewhere before the sugar of cane and beet ousted it so completely.

They who have tasted linden honey of England or Scotland may detect a peculiar, rather winy, yet musty flavor, inclining to a suggestion of "dry" acridness. Throughout eastern and southeastern Europe the bee-



keepers obtain this, which many aver to be Europe's finest bee product, without its peculiar taste, and get it in the simplest of ways. No liqueur can surpass Dantzg-wasser in delicacy of flavor, yet it is made solely from lime tree honey devoid of the faintest tang.

All that the beekeeper does is simply to expose the linden honey, purified of its wax, for some weeks in the winter, to the open air, and it then becomes hard and entirely free of the lime tree tang, and as white as driven snow, although at first, when extracted from the comb, it is of a strong yellow hue. This white, hard honey is preferred by far above the purest sugar in mid-eastern Europe, and the Balkans, for medicines and liqueurs.

The lime tree honey of Galicia and other parts has this peculiarity: that, after it has been exposed and hardened in bulk, when melted with water it does not harden again of itself, and neither does its transparency become impaired, nor does it develop any peculiar flavor.

Where lime tree forests reach for miles, say, around Kovno and neighboring little towns in Lithuania, wealth is reckoned as much in beehives full as in rix-dollars or other money; for there the bee is a money-maker, and on a scale seldom come across elsewhere except in the Narbonne and the very few such favored areas.

Vienna, city of connoisseurs yet, even in her poverty, is the devotee of honey from the lime tree.

England.

## Honey Suet Pudding

- 1 cup suet cut fine
- 1 cup HONEY
- 1 cup milk
- 3 cups flour
- 1 teaspoon soda
- 1 cup raisins
- 1½ teaspoons salt
- ½ teaspoon ginger
- ½ teaspoon cloves
- ½ teaspoon nutmeg
- 1 teaspoon cinnamon

One-half cup nut meats may be added.

Method—Mix and sift dry materials, add raisins and nut meats cut fine. Add honey and milk to the suet. Add wet ingredients to dry. Pour in greased mold, cover, and steam three hours. Serve hot with honey sauce.

### Honey Sauce

- ½ scant cup HONEY
- 1 heaping tablespoon cornstarch
- 1 cup boiling water
- 1 tablespoon butter

Method—Pour boiling water on cornstarch, stirring rapidly. Boil and stir until clear; add honey and butter. Serve hot or cold.

Mrs. Newman I. Lyle.

## A New Honey Region

By Robert M. Mead

UP until a few years ago beekeeping in the prairie provinces of Canada was not very well developed. Grain and cattle raising were the chief industries, as they are today. But at that time there was not any crop raised which would be of much benefit for nectar secretion. Today things have changed, and the change is due to one plant, biennial white sweet clover. Ordinary white sweet clover winter-killed to quite an extent, so a strain was developed known as "Arctic." This grows as far north as it is possible to grow wheat. It has become quite popular among grain growers and farmers, as it produces a crop of forage, at the same time improves the land. It is usually sown with oats on land where wheat has been raised for several years. The second season it is cut once for hay, allowed to grow up again and that time it is plowed in. Some grow it for seed. In that case the seed is allowed to ripen, then it is cut with a binder, the bundles left on the ground until threshing time, as it threshes easier when it has been exposed to the weather. The seed usually brings a price of 10 cents a pound. When pastured it blossoms from July until killed by a severe frost.

Where sweet clover grows, bees follow. In the prairie provinces there are now some bees, but a very small number considering the acreage of sweet clover. Generally the yield per colony is tremendous, judged by the standards of a non-sweet clover district. I have seen colonies in the northern edge of the wheat region which filled five full-depth supers, or more, while a three-frame nucleus shipped into the same district, in the spring of 1927, produced 200 pounds of extracted honey that summer. All of these bees had access to large fields of sweet clover.

The weather (during the summer) seems ideal for nectar secretion—warm, sunny days and cool nights. Even during the hottest summer months a night temperature as low as 40° F. often occurs. The days are long, the nights often less than one-third of the twenty-four hours.

Wintering bees in the more northern sections seems to be a job that requires considerable knowledge and experience. The winters are quite long and the cold steady. Cellar wintering is almost always the rule. Some prefer to take all the honey and buy package bees again in the spring. This works very well, as there is time for a package to make a good colony before the honeyflow commences. The only addition to the price for bees delivered so far

north is usually the added cost of shipping. There is considerable discussion about the best method of shipping queens with packages. Some methods have been worked out that are very satisfactory. The most popular is shipping the queen in a dry cage hung among the cluster of bees. The bees feed the queen and become acquainted with her en route. Receivers of package bees up there tell me that a package that arrives with a dead queen or a worthless one is almost a complete loss to them. Shippers always replace such queens if it is requested, but the second queen arrives too late to be of much value that year.

The honey market is good for a small local crop. The wheat farmers and their families are great consumers of honey. In the district where I visited, the price of a ten-pound pail extracted was as high as \$2.50. A great many would use more honey if it was easier to get and the price lower. In some cases they have to drive long distances for it. The demand is almost entirely for extracted honey. They (the honey consumers) do not like to chew wax the way we do in the New England states. When honey is produced on a much larger scale, as it can be and apparently will be within a few years, there is going to be quite a large market problem. After the fine local demand is satisfied the market for the bulk of a large commercial crop is a long ways off in any direction. It will take a fine business man as well as a good beekeeper to succeed. Without doubt an association will be formed to handle the crops of its members. There are already such associations in some parts of Canada, whose work is admirable.

In summary it might be said that the attractions for beekeeping in the prairie provinces are large crops, a fine quality of honey, a good local demand; besides, the people are nice and welcome anyone who is honest and a worker. The climate is healthful. Tuberculosis is rare in the clear, dry climate of the wheat belt. Social conditions are fine; good schools, good entertainment and freedom of worship. There are at least sixteen different creeds or denominations in the province of Saskatchewan.

As some of the difficulties might be mentioned disposing of a large crop at a profit; difficult wintering; higher cost of package bees, due to long distance shipped; the possibility of general overproduction; inability to market crop for cash as soon as extracted, at a suitable profit; six



months of each year without anything to do. Don't all rush for the new sweet clover region; it is good,

but it has some setbacks just the same as any other region.

Vermont.

## Honey Makes Money for Agricultural Freshman

THE proverbially busy bee has found a rival. Francis Steele, freshman in the College of Agriculture at the University of Missouri, is paying his way through school by selling honey from his father's farm nine and a half miles south of Chillicothe, Mo. The venture isn't an entirely new one. As a senior in the Chillicothe High School last year he discovered the possibilities of the business when sales more than covered his expenses.

A year ago last November, Steele planned to visit his brother in the University and attend a football game. At his father's suggestion he brought along a few gallons of honey just to try his luck at selling in a new territory. Most of it was gone before he reached his destination, and the rest was quickly disposed of in Columbia.

Last July, when the year's crop began to come in, Steele made a trip to Moberly and Columbia. The sales of his product brought in about \$200, which he now has on a checking account. It remains almost untouched, however, as weekly sales, which vary from forty to eighty pounds, have paid most of his expenses.

Beekeeping is only a side issue on the Steele farm. As the 240 acres are devoted to diversified farming and the crops managed almost entirely by the father and his two sons, careful planning is necessary in order to give the best attention to the bees in the shortest possible time. Such a plan has been evolved.

The supply comes from sixty M. D. hives of Italian bees built up within the last six years from a few hives of the common black variety. Supers can be easily and quickly removed from these hives and new ones inserted. A shed open to the south houses them, a few of the hives being moved outside during the warm months to avoid crowding. It has been found that much of the regular work with the bees can be done at odd times. No special crop is provided for them, but they range over the sweet clover in a small orchard and a field of alsike clover.

"It's great work," says Steele, who seems thoroughly sold on his business. "I learn something new from those bees every day. But don't you ever believe anybody who tells you he can work with them all the time and never get stung. Even the most experienced get it sometime. Once

last summer I let my mask get too tight over my face and I'll be shot if one of them didn't sting me right on the end of my nose. It didn't swell—you get sort of immune after so long a time—but maybe you think it didn't hurt!"

Steele makes most of his sales to stores in Columbia, visiting them every two or three weeks to solicit orders. When his honey—and money—begins to run low, he cranks up his trusty Ford and drives to Chillicothe. There he fills the truck-back with boxes of honey carefully packed in straw padding and makes the 140-mile trip back to Columbia.

It sounds easy, but—. "There are times," says Steele, "when the crops and the bees both need attention at once, and the job isn't so good. It costs something to start a business, too, now that a fellow has to have a certain kind of hive and pay a tax on his bees. The government gets 15 cents a hive out of us since last summer. All the years aren't as good as this one for the business, either. No, I wouldn't advise other men to pay their expenses this way—not in Columbia for the next three years, anyway."

### Honey Producers Must Advertise

Honey sales show a remarkable falling off; there are reasons why a further decrease should be expected in the use of honey. This condition is disclosed by the joint survey which is being carried on by the Federal Department of Agriculture and the New York State College of Agriculture. Some preliminary findings of the survey were announced by Prof. M. P. Rasmussen in a talk here at the annual Farm and Home Week. Professor Rasmussen has had a prominent part in this survey, which includes a study of the problems and opinions of producers, wholesalers, retailers, and consumers of honey throughout the United States.

The chief reason for the situation in respect to honey seems to be that people know little about honey in comparison to their familiarity with its chief competitors—sugar, corn syrup, molasses, and jams. Hotel and restaurant men state that if honey is put on the tables with corn syrup and jams, the patrons eat less of the honey. This is not because of its price, since the price is no more than that of the jams.

The study shows that beekeepers do little advertising; that even now only a small proportion of them will agree to cooperative advertising. This is thought to be a main reason why the public is so ignorant of honey as a food and why they eat so little of it.

This fact is further emphasized and brought out by figures showing how much more honey is sold by stores which advertise it. In a study of retail stores in Elmira, New York, it was found that thirteen stores which advertised in newspapers sold 18,927.5 pounds of extracted honey, or an average of 1,455.9 pounds to the store. They sold 4,629 pounds of comb honey, or 356 pounds to the store. In the same city fifty-two non-advertisers (stores) sold only 9,089.9 pounds of extracted honey, or 156.6 pounds to the store, and 6,291 pounds of comb honey, or 121 pounds to the store.—Contributed by the Agricultural Extension Service, Cornell University.

### A Few Words from Scotland

I am not an old subscriber to the *American Bee Journal*—More shame to me,—but I am not a chicken in the ranks of beekeepers. I got my first lot of bees in 1876; when I was located in the County of Fife, and, being surrounded by plenty of fruit blossom, followed later on by an abundance of clover, my take of honey was usually most satisfactory.

My practice was to have my stocks fairly boiling over with bees by the time clover opened, and then to limit brood rearing, thus throwing a very large force of foragers into the fields. I then went around the country and booked my season's orders. When the crop came off, I put it up in a clean and attractive manner, glazing all my best grade sections. These commanded the best price, and the seconds and thirds at proportionately less.

By this method of dealing, my customers grew on me every year, and some booked a standing order. It was with regret I had to move into the city, but kept my bees in the suburbs and had only variable takes after that. Acarine disease then came along and, like others, I suffered heavy loss.

I am now located on slopes of the Grampian Hills, in the once beautiful Glen of Drumtochty, before it was denuded of trees for war time timber. This beautiful spot must be known to some of your readers. It is a splendid place for clover, and heather is also within reach.

I am pleased to say my stocks have so far wintered well, having had quite an arctic winter, and all are healthy. They have had three flights since January came in.

William R. Luca.



# Beekeeping Among the Orange Groves

By William G. Hewes



View of lemon and orange orchards at Corona, California, bee hives near trees in center of picture. Apiary of L. L. Andrews.

**T**WENTY-NINE years ago, because of drouth, I moved with my bees from the sage districts of southern California to the alfalfa districts of central California, and now after all these years I am back again in southern California, but this time in the orange districts.

When I came here to live I had no intention of again engaging in beekeeping, but, finding time hanging heavy on my hands, I purchased thirty hives of bees, in January of this year, from an old fellow who had captured them the spring pre-

vious by setting out boxes in trees.

A more miserable lot of bees it would be hard to find, for most of them were not only honeyless, but practically combless and beeless. It was January 19 when I got them home, and I at once started feeding them sugar syrup, which I kept up until March 20, at which time oranges were in profuse bloom and new honey beginning to come in.

Today, May 9, the orange bloom has practically gone. This makes fifty days of honeyflow from that source. I marked on my calendar,

each day, my opinion of the day from the viewpoint of honey secretion, as judged by the temperature and the wind. I have recorded eighteen days as bad, eighteen days as good, and fourteen days as fair. I have not extracted the honey, but some of the hives have drawn out foundation enough to fill three supers which I think will contain as much as one hundred pounds of honey. The broodless combs from one strong colony, in which I had found a few cells of foulbrood, when run through a capping melter, nicely filled a sixty-



Two California apiaries in typical locations.



pound can with honey, and there is much more to be had when the remaining nineteen combs are melted.

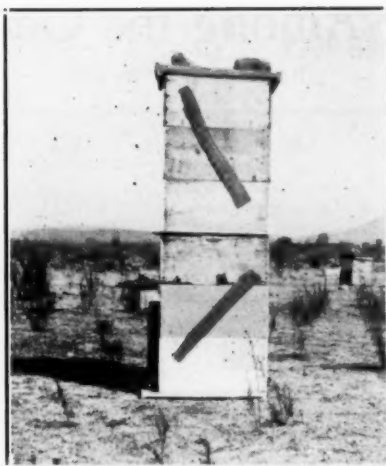
I believe that a person starting in January of this year with strong colonies with good queens could, by giving them some protection from the cold, and by stimulative feeding, to induce early brood rearing, have so built them up as to get an average yield of orange honey in excess of a hundred pounds.

I do not know of anyone who has done as well as that. The average yield of most of the beekeepers will be nearer thirty pounds; but then I do not know of anyone who had good hives to start with who has given protection from the cold or practiced stimulative feeding. Some keep their bees through the winter in hives with three and four full-depth supers on them, and entrances wide open. Such bees cannot be expected to build up in time to take full advantage of a honeyflow which begins the middle of March.

Apiaries are very close together around the edges of the orange groves. Five of the views which I enclose are located on a one-mile strip. None of them is farther than a quarter of a mile from one of the others, and two of them are located less than an eighth of a mile apart.

The view shown above is a portion of what is left after an apiary has been moved from the sage districts to the orange groves, the diseased ones being left behind. By looking closely the letters A. F. B. (American foulbrood) can be seen in the picture. There are a dozen of these hives. Most of them have been reduced to single stories and the brood given to the one.

I hear complaints of foulbrood everywhere, and this is not to be wondered at, as there are so many people who have bees—some of whom are ignorant, some of whom are careless, and some of whom are indifferent.



Diseased colonies, with brood stacked on them, left behind when moving from sage to orange.

I believe with the end of the orange flow the honey season here will come to an end, as I have never known the mountain bloom to amount to anything with so light a rainfall (eight inches) as we have had this year. California.

### The League Policy on Honey Grades

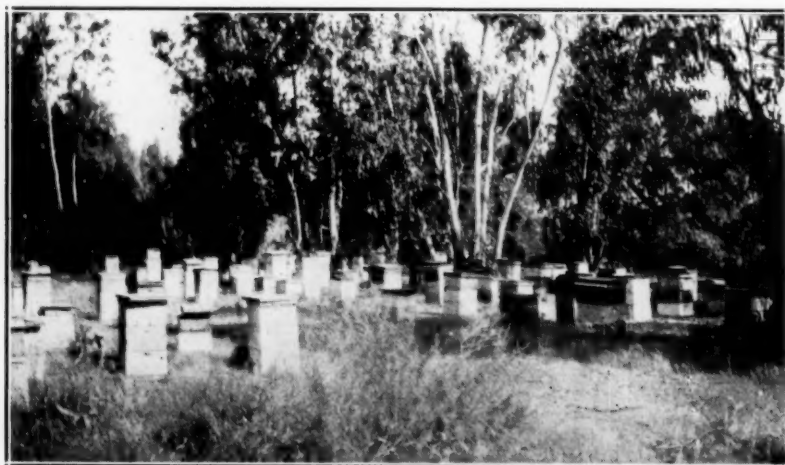
THERE seems to be a widespread misunderstanding concerning the policy of the American Honey Producers' League on the revision of the color scale of the U. S. honey grader. Misunderstandings are at the seat of most human troubles, and since this one may lead to pernicious sectional jealousies and direct animosity towards the League, we feel it necessary to "nip it in the bud." To do it now will cause far less hard feelings than to let the thing drag on.

To begin with, the League has not made any recommendations to the government for the change of the color scale, statements to the con-

trary notwithstanding. The basis for these statements is the fact that a committee, functioning at the honey marketing conference held the day after the recent League convention closed, brought in a report recommending a change in the color scale. This was not an official League committee and could not, from the nature of the lack of national representation, be such. At the close of that conference the position of the League was made very clear, as will be seen by the published report of the conference appearing in the March, 1928, issue of the American Honey Producer, page 150. Two sentences from that statement should suffice to clear up the League's position in the matter. It reads: "At this meeting we do not have a sufficient representation from the eastern and southern states for immediate action. If these committees are to be recognized by the American Honey Producer's League, we wish that we might prevail upon these committees to recognize this fact, so that they can be depended upon to do the good work they have started upon a truly national basis."

Much to my chagrin and embarrassment, three weeks ago I received, with the manufacturer's compliments, the new color scale, and found engraved thereon, "Adopted by the American Honey Producers' League, 1928." That was my first knowledge that anyone, either wittingly or unwittingly, had misunderstood the position of the League in the matter. Needless to say, we attempted to show the manufacturer the gross error which had been committed and asked that all scales which had been distributed be called in and mention of the League left off of them. We have no objection whatsoever to the western beekeepers and honey exporters using this revised scale if they wish, but they cannot use it falsely in the name of the American Honey Producers' League. Neither can they use the League's name to induce the U. S. Bureau of Agricultural Economics to adopt the scale for the U. S. grades. If a truly national committee, such as the one now appointed, passes such a recommendation and it is adopted in a League convention with good national representation, that will be time enough to let our wishes be known to the government.

In other words, the League is truly a national organization in spirit and deed. We must frown upon any action which will lead us into sectional differences of opinion. We sincerely hope that this statement will be given wide publicity in order that the American beekeepers may know that the good offices of the League are not being misled by the wishes of any particular region or group of men. C. L. Corkins, President.



Still another apiary in sunny California



## Honey Ice Cream—A Possible Market for Honey

By B. M. Derby

"Honey ice cream may prove to be a new market for honey," says C. A. Iverson, associate professor of dairying, Iowa State College, Ames, Iowa.

Professor Iverson has been experimenting in the making of an ice cream which is 16 per cent honey, but is not satisfied with the texture of the ice cream which he has produced.

I found the flavor delicious, and I did not notice that the texture was coarse until it was brought to my attention. The name, honey ice cream, had a very intriguing sound to me. This attractive name should help the sale of the ice cream if it were manufactured commercially.

Milk and honey are considered by health authorities to be two of our healthiest foods. Honey ice cream is 99.7 per cent milk and honey. The remaining 0.3 per cent is gelatine. Its health-giving qualities, Professor Iverson believes, would add to its popularity.

Vanilla and honey do not produce a pleasant flavor when mixed, Professor Iverson found, so he now omits the vanilla. A variety of flavors are obtained by the use of different varieties of honey.

"Honey ice cream should not be more expensive to produce than other ice creams," said Professor Iverson. Honey, when bought in wholesale quantities, is a little more expensive than sugar. But flavoring, which is one of the most expensive ingredients in ice cream, is omitted.

Professor Iverson suggests that this ice cream can be made at home. The usual recipe for vanilla ice cream can be used. For every pound of sugar required, substitute a pound of honey. The vanilla should be omitted.

Iowa.

## Yeasts in Fermented Honey

This is a contribution from the Department of Entomology and Bacteriology of the University of Wisconsin, from tests and experiments by George E. Marvin at the University of Wisconsin.

We believe that this matter of yeasts in honey is of some importance, as studies by Dr. Lardinois, of Belgium indicate that some of the diseases of the adult bees, in spring, are originated by the existence of yeasts in the honey that they consume at the end of winter.

The contribution in question is an abstract from the *Journal of Economic Entomology*, Vol. 21, pages 363 to 370, with four plates.



## Translator of "The Honeybee" into Russian

Mr. V. Raykovsky, who has translated "The Honeybee", into the Russian language. It is also obtainable in French and in Spanish both of which languages are readily understandable to us. The new tongue, Russian, however, is beyond our reach. Russia is a tremendous country with a great destiny and we would like to understand enough of her extremely individual language to get a bit closer to her people.

## Enemies of Bees

We list a few enemies of bees in our books. But we have no such thoroughness in it as our Russian contemporaries. A book lately published in Leningrad makes up an immense list of bee enemies and parasites. It is to be deplored that we cannot read the Russian language. They are certainly ahead of us, for in addition to their own language most Russians can read and speak French, and many of them English.

The above mentioned book contains about 200 pages of descriptions. The list begins with the four-footed mammals which prey upon the bees, beginning with the bear and including some six or seven animals, some fourteen varieties of birds, six reptiles, snakes and saurians, toads, and myriads of insects. One old acquaintance, the waxmoth, and the bee louse and many other parasites are listed. It must be interesting reading.

## Sainfoin

When reading in the *American Bee Journal* on sainfoin, I remembered my father sowing it more than twenty-five years ago. He did not get a good stand and it was plowed up, but a few plants at the edge of the field were living fifteen years after. It is also called Espar in German, also Esparsette. We bought the seed of John A. Salzer of La Crosse, Wisconsin, who still lists sainfoin as Esparsette at five pounds for \$1.35 and probably could give us more information as to where it is grown.

Julius Digel, New York.

## De Kalb, Illinois, Association Exhibit

It seems logical to expect local beekeeping associations to get behind local publicity for their honey. The importance of well planned exhibits at fairs, food shows, and similar gatherings cannot be overestimated. A persistent follow up of other ad-

vertising on the part of the association or of its individual members, in the community markets and papers, nearly always disposes of local crops to advantage and at prices in keeping with what we must get to make beekeeping profitable.





# The Policies and Plans of the League for 1928

By C. L. Corkins, President

IT WOULD seem apparent from the records of the Secretary's office that a large percentage of the beekeepers of America are withholding membership in the American Honey Producers' League until they are convinced that our policies and plans for work are worthy. The beekeepers are not to be blamed for such an attitude. It is only fair to them that we "lay the cards on the table." Then if they are satisfied with our prospectus, they must shoulder the responsibility of furnishing the funds with which to carry on the work. With the nominal fee of \$1.50 per year, it would hardly seem possible that any beekeeper is holding back purely for financial reasons. In so-called "poverty-ridden" Germany today, the National Beekeepers' Association justly points with pride to their membership of 110,000 beekeepers. As I look over their program of work, I find it so much like our own that I take courage in the hope that the administration of the League will merit a similar response in the United States. If so, I fear not for the future of our national organization or of the industry.

In brief, our policy will be to so conduct the League as to eliminate from the program of work to the barest possible minimum all matters upon which there must naturally rise serious sectional differences of opinion. This is a national organization. There are sufficient national problems affecting us all, and upon which we can all come to a more or less general agreement, to keep us busy for all time to come. There is a definite sphere of activity for the state and regional organizations. Their premises should not be usurped by a national organization. Rather there should be had a complete basis of understanding and the fullest possible measure of cooperation in matters of common interest.

In order to best carry out the principles of this policy, the personnel of all committees has been chosen with the idea, first, of the qualifications and interest of the appointee, and secondly, his geographical location. Willingness to get into the collar and work must be the first consideration. After that we want to get men who will be able to represent the various beekeeping regions of the country, so as to harmonize our work into a really national program. These, alone, are the considerations which have been weighed by the present administration of the committees which will be fully announced within the next month.

To further carry out the principles

of this policy, we have the Board of Directors consisting of eleven members from every conceivable beekeeping region of America. Any one of them will tell you that all matters of real importance in administration and program of work are submitted to them for consideration and ballot vote before we proceed. How better can the best interests of the League be safeguarded, as cumbersome and time-consuming as the method may be?

Now for the prospectus of our program of work for this present season. Naturally our plans are only tentative. Some of them are certain of fulfillment. All of them are if the beekeepers can be sold to their value. Their complete execution is a joint responsibility of the beekeepers and the officials of the League. The officials are "rarin' to go." When you have looked over these plans carefully, we hope and trust that you will be ready to furnish the "gas."

Our program can best be presented by enumerating the most important items and discussing each one briefly.

1. The General Marketing Committee: This committee has as its chairman Mr. A. W. B. Kjosness, General Manager of the Mountain States Honey Producers' Association, Boise, Idaho. Mr. Kjosness voluntarily assures us that only matters of national importance will be considered by his committee. The general committee is divided at the present into three sub-committees—

(a.) Grades of Honey Committee of which M. S. Stone of Ogden, Utah is chairman. This committee will assist the federal government in the establishment of U. S. grades of honey and in the improvement of grading standards and rules. National and international acceptance of the U. S. grades of honey will be sought.

(b.) U. S. Honey Crop Reporting Service Committee of which C. A. Reese of Columbus, Ohio is chairman. Previously organized beekeeping has not cooperated with the U. S. Bureau of Agricultural Economics in an attempt to make these reports more accurate and helpful in giving a true picture of the honey crop conditions over the country. An earnest effort will be made to help the Bureau to improve this service, from the standpoint of the beekeeper, and make it an invaluable aid in the intelligent marketing of the nation's honey crop.

(c.) Transportation and Standardization of Containers and Cases Committee of which N. E. Miller of Pro-

vo, Utah is temporarily chairman until someone can be found to fill the place which he voluntarily relinquishes. A heavy percentage of loss in domestic and foreign transportation of honey may often be traced to an improper pack. A sound basis for requests for lower transportation rates must be founded upon a standardization of cases and containers. Undoubtedly this will apply to the important package bee industry as well. A sub-committee working specifically upon the revision of the classification for package bees finds that the express companies are seriously considering upward rather than downward revision, and that it will be a battle to even hold the present classification. Certainly here is work of national importance to be done.

(2.) Committee on Honey Publicity. Mr. R. B. Willson of New York City is chairman of this important committee. Mr. Willson has had a wide experience in both the production and marketing fields and has well defined, practical views upon honey publicity work for the League. At the Convention there was an insistent demand for honey publicity program. The report of the convention committee, however, could be briefed to read, "Let George do it." There seems to be no logical reason why we should follow such a course, unless the beekeepers really do not want honey publicity. No pretentious national honey advertising program will be advocated. A project of national scope which can be made to function on a financial basis varying from \$2,000.00 to \$10,000.00 per year is being worked out. The full details of this plan will be completely matured before it is presented to the beekeepers for their action.

3. Honey Exhibit at Convention of the American Dietetic Association, Hotel Willard, Washington, D. C.

The League has contracted for exhibit space with the American Dietetic Association and will put on an exhibit at their annual convention October 29-31. Exhibition privilege at this convention comes by invitation only. Thirty-six exhibit spaces are available, running in cost from \$100.00 to \$225.00 each. But it should be worth all of that and more too. The American Dietetic Association has a membership of over 1,100, including the leading dietitians of hospitals, cafeterias, tea rooms, dormitories and hotels of the country. Sixty-one percent of these purchase **all of the food** for their institutions.



Besides the exhibition privileges, the League will receive the following publicity thru the Association:

(a.) Announcement of the exhibit will be printed in the programs.

(b.) Special daily announcements and invitations may be inserted in the daily bulletins of the convention.

(c.) An announcement of the exhibit in the September issue of the Journal of the American Dietetic Association.

4. Committee on Cooperative Honey Publicity. We are not yet ready to announce the chairman of this committee, altho work is under way. The function of this committee is to interest other packers and manufacturers of food products in honey in a manner similar to the support given by the Kellogg Company.

5. Committee on the Uses of Honey. Miss Mary I. Barber, head of the Home Economics Department of the Kellogg Company, Battle Creek, Michigan, is chairman of the committee. This committee is rendering a very valuable service in assembling and tabulating information upon the multitudinous uses of honey. If there is a demand for it, we shall call upon this committee to write a new League Honey Recipe Booklet. The old edition is exhausted. This sort of service given at cost on volume printing should have a widespread appeal to almost all beekeepers. The League only awaits their expression of opinion before acting.

6. Marketing Project with the University of California. The University of California has recently been made the benefactor of a sum of \$1,500,000.00 with which to study and solve agricultural marketing problems. The work is in charge of the Gianniani Foundation of Agricultural Economics, named in honor of the donor, Mr. A. P. Gianniani. In recognition of the fact that the honey marketing problem of California and the Pacific Coast has a profound influence upon the national honey market, the League has taken steps to encourage the University of California to use a portion of this fund to study and solve the honey marketing situation of that particular region.

7. Additional Funds for the U. S. Bee Culture Laboratory. One of the primary purposes of the League as set forth in the Constitution is to encourage and aid the development of research. The U. S. Bee Culture Laboratory in Washington, D. C. has had no increase in appropriations for years, yet they have an increasing amount of work to do and many new problems are being laid before them. This year we asked for an additional appropriation of \$20,000.00 with which to carry on research on honey

and to provide for fieldmen to assist in organizational work in the field. Our demands could not be pushed too strenuously without jeopardizing the appropriations for the Southern Field Station, which the League endorsed. The field station is now assured, but we shall probably get nothing else from this Congress. However the groundwork has been laid, and with no other item requested in Washington at the next session of Congress, we should have little difficulty in obtaining an increase in appropriations.

8. The Corn Sugar Bill. Of course the League is fighting the Corn Sugar Bill. We will have a representative in Washington to present our case at the committee hearings. For financial reasons, private organizations (our thanks to them) have taken the lead in this fight. When the honor and glory of victory is passed out, we will have to defer to them. But may we be pardoned for raising the question of their chances of victory were it not for the state and national beekeepers' organizations? Think that over.

9. The Annual Convention. There are those who believe an annual convention, alone, would justify a national organization of beekeepers. The time and place of the next convention have not yet been fixed, but you may rest assured that the program will contain the following features:

(a.) A strong educational program of papers.

(b.) A honey marketing conference.

(c.) A national honey exposition.

(d.) A "free for all" swapping of ideas in the halls, which is the real life of any convention.

10. The Warning Poster Service. When it was announced that the warning poster service of the League might be dropped because such a small percentage of the members took advantage of it, letters came in from all over the country asking that we continue it. Those who have used the posters are almost unanimous in their opinion that they have stopped almost all thievery in their apiaries. This whole question is now before the directors for a decision and it seems likely that the service will be given a trial for one more year.

11. The American Honey Producer. Last, but we hope not least, is the publication of our monthly official organ. We shall not take space to tell you all about it, for you can see for yourself by writing the secretary to send you free sample copies. Won't you please show the League officials this simple courtesy in deference to the free service they are trying to give you so that we may

give you a more concrete idea of what we are doing?

This leads us to the announcement of the Secretary of the League for 1928. It is our great privilege and honor to present Mr. J. V. Ormond, State Apiarist, Little Rock, Arkansas. Mr. Ormond is a real leader in beekeeping, truly risen from the ranks. We speak of "dirt-farmers." He is a "honey-beekeeper." His college has been his bee yard. His entire livelihood has come from a successful honey and package bee production business. During the war, his qualities of leadership and his intimate knowledge of the bee business were recognized by the government and he became a field agent of the U. S. Bee Culture Laboratory under Dr. Phillips. It was then that he recognized the disorganization of beekeeping in his own State of Arkansas and the many problems that faced them. His unceasing efforts in behalf of the beekeepers of Arkansas following the war led to the formation of their state association. Then came state legislation and the formation of a state apiary inspection service. In recognition of his efforts, his co-workers had him placed at the head of this service.

So Mr. Ormond left his home and his bees at Elba in charge of his sons and has proceeded to place Arkansas upon the beekeeping map. Last January he was elected secretary of the Southern States Apicultural Conference. Now he is secretary of the League.

Let's give him the support that will bring to maximum fruition his faith and conviction that organization will save the beekeeping industry. Mr. Ormond is full of ideas and enthusiasm for the League. Our memberships will keep him going. We have "cooled off" too many willing and active servants of our industry in times past. But, thank goodness, history does not necessarily have to repeat itself, if your check for \$1.50 goes forward to Mr. Ormond without delay.

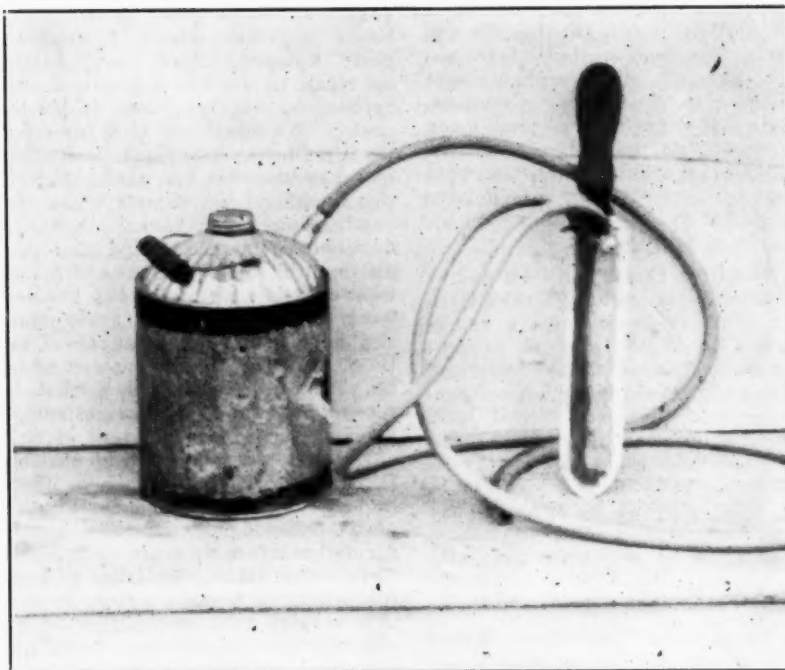
## Strong Colony in Spring

We recently received a photo from S. H. Holloway of Balmoral, Manitoba, showing a colony of bees taking its first flight on April 1, after four and one-half months' confinement in the cellar. The hive was covered with bees as would be the case in hiving a large swarm. The indications are that the colony is surprisingly strong after the long confinement. Holloway writes that he put eighty-nine colonies in the cellar and took out eighty-nine, all in good condition, on March 31. Evidently the winter problem is not serious in the North where good cellars are available.



## A Cheap Hot Knife and Boiler

By E. G. Carr



I FEEL sure that many beekeepers are "making out" with an unheated uncapping knife because the size of their operations makes them consider it unwise to spend five dollars for a steam-heated knife and three other dollars for a boiler for generating steam. This was my attitude of mind, but my Scotch tendencies came to the rescue and now I am enjoying the convenience of a steam-heated knife, which greatly speeds up the uncapping and also makes it easier, and at a fraction of the figures mentioned above.

I secured a piece of copper tubing one-quarter inch in diameter and took that and the uncapping knife to a tinsmith. For 75 cents he put a copper jacket on the knife with the copper tube in place and a short tube for the exhaust steam. At a store specializing in rubber in all forms I found a hose of the proper diameter which has several layers of canvas in its makeup. It is very similar to the hose on a tire pump. This cost me 40 cents.

My economic tendencies would not let me see my way clear to buying a copper boiler steam generator, even though equipped with a safety valve, so I used a one-gallon kerosene can. A pasteboard gasket under the filling cap makes it tight as necessary. The hose is simply shoved on the can spout. Nothing more is necessary. No, it isn't equipped with a safety valve, but if the pressure becomes too high the hose will be blown off the spout. Simple, isn't it? However, I have never had this to occur.

So there you have a steam-heated knife, boiler and everything at a cost of approximately \$1.75.

It is entirely possible that a large operator would find this simple outfit inadequate. However, I feel there are hundreds who are "making out" with a cold knife and having considerable difficulty with it at times, who will find this simple arrangement a wonderful help in their work.

New Jersey.

### What is a Package of Bees Worth

By H. H. Laidlaw, Jr.

I WANT to say in the very beginning that the worth of a package of bees is in direct ratio with the worth of the queen. You may have bought a five-pound package and a two-pound package. If the queen in the five-pound package is inferior to the one in the two-pound package, you have made a bad investment.

It is very important to the buyer that he know where his queens come from. Quite a number of the shippers of bees buy the queens for their packages. They buy them at the lowest possible figure. Of course, in doing this they buy from the cheapest source, paying 35 to 50 cents each.

A man raising queens for this amount cannot be raising very good ones. He grafts from any queen and does not grade his cells or queens. The buyer of the package pays as much for these poor queens as he

should for good ones, and he loses honey by it.

When these poor queens fail to produce as they should, he thinks he needs more bees to the package. In his next order he pays a dollar more for an extra pound of bees and experiences the same results he had with the smaller package.

The buyer will be well repaid if he specifies from whom his queens must come.

Many of the shippers who raise their own queens do so carelessly. Before and during the shipping season, one is so busy he hasn't time to attend to his queens; therefore the result is neglected queens. He needs queens and he needs them badly, so he uses whatever he can get hold of.

I want to say again, the worth of a package is governed by the worth of the queen. Florida.

### Italian Bees Imported Into Switzerland Without Permit

Bulletin of the Romande Association: "Last year, in early April, Mr. Ch., living at Renens, gathered, at the railroad station of Lausanne, a swarm which was hanging under the roof of a freight car arriving from Brig. Considering the date, it was plain that these bees were coming from Italy, for the Swiss bees are not so early. In the same manner, three swarms were gathered in similar circumstances at the Lausanne station. But Mr. Ch.'s bees were not ordinary bees; they were bees fully convinced of the greatness of Italy. The swarm, which weighed little over a pound, was fed till the end of May, after having been supplied with combs. At the end of May it filled its hive, and in June yielded 110 pounds of honey, while the other colonies of the same apiary yielded only two to five pounds. But one should not be astonished at their ability, since they had been intelligent enough to take the train without taking a ticket and cross the frontier without allowing any control from the custom-house employees."

### The Largest Honey Producer

A newspaper clipping on our desk advances the statement that Mr. J. J. Wilder, of Waycross, Georgia, is the largest beekeeper in the United States, managing some 15,000 colonies of bees.

Wilder began beekeeping in 1897. He began writing for the American Bee Journal in 1904 and soon published his own little bee magazine, "The Dixie Beekeeper." It is now in its tenth year.

We visited Mr. Wilder some ten years ago and know that he is very practical, even though keeping bees



in a wholesale manner. The men whom he employs in his numerous apiaries were well pleased with his management and fair methods. The apiaries are located near the Suwannee River and around the great Okefinokee swamp of Georgia. It is reported that he shipped more than thirty carloads of honey out of Waycross last year. The honey is mainly from the magnolia and the gallberry.

Mr. Wilder is a supporter of the use of "square jars" for honey, when the honey is of light color. He asserts that if two shelves are filled, the one with round jars, the other with square jars of honey, everyone will prefer the square jars. In his magazine for May, he gives the address of a manufacturer who makes square jars for honey. Mr. Wilder says that he never has any difficulty in selling his honey, no matter how much he produces.

## Packing New Zealand Honey

The U. S. Department of Agriculture Market News Service, in their semi-monthly report, issued May 1, 1928, includes an instruction sheet as issued by Mr. T. S. Winter, apiary instructor and honey grader at Hamilton, New Zealand. This is issued to New Zealand beekeepers on packing of honey for export.

The instructions are in use and cover the quality of honey, the freedom from scum and froth, grading, etc.

Particular attention is paid to the grain of the honey, which is all shipped granulated. He advises a smooth-grain honey, with particular instructions on how this may be obtained.

The item of containers is also dealt with especially. Rusty containers are to be avoided, either by oiling the tin with linseed oil or by lacquering it. A warning is issued against mixing more than one grade of honey in the same shipment or in the same wood container.

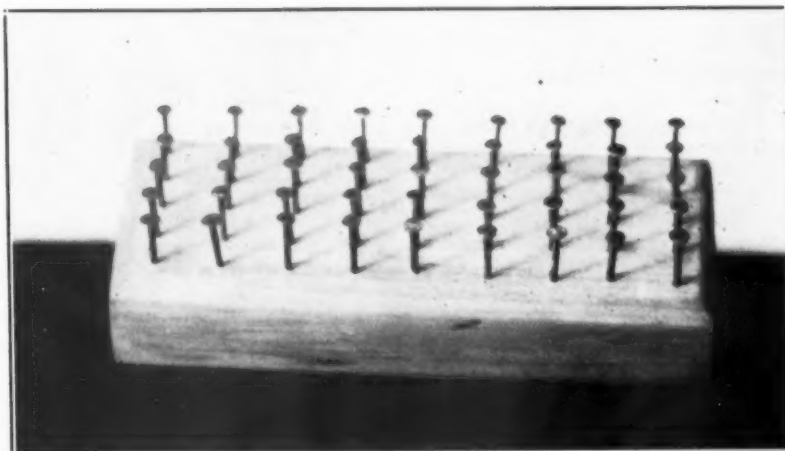
Another item of warning is against any unnecessary marks on the cases when they are shipped.

In conclusion, Mr. Winter points out ten ways in which beekeepers can safeguard their honey against deteriorating and against a lower market.

The report is well worth while and may be obtained by addressing the Market News Service, U. S. Department of Agriculture, Bureau of Agricultural Economics, and asking for their semi-monthly report, dated May 1, 1928. As a matter of fact, every up-to-date beekeeper should be on the mailing list for this semi-monthly report, as it is well worth while, at least from a marketing standpoint, and as well from information obtained from other market sources.

## "Back Lot" Uncapper

By E. G. Carr



THERE may be persons who feel that not much is to be expected in the way of new fixtures or apparatus for beekeeping.

This attitude of mind is not the best, since it discourages efforts to improvement.

No doubt every new idea advanced in every calling has been met with more or less ridicule which has further served to discourage efforts along hitherto untried lines.

Because beekeepers work to a large degree by themselves, they often devise pieces of apparatus which they use without saying much about it, believing, perhaps, that others have worked out the same device.

With the idea of calling out some of these pieces of apparatus, the New Jersey Beekeepers' Association offered prizes for such as would be shown at the last annual convention.

Two of the three which were awarded prizes were really adaptations of ideas, while the third seems to be entirely new.

It is called the "back-lot" uncapper and was devised by Mr. Walter E. Rutan, of Montclair, N. J. It consists of a block of wood about two and a half by four and a half inches and about seven-eighths of an inch thick. In this block is driven five rows of plastering lath nails, nine nails in each row, spaced about one-half inch apart from center to center.

Mr. Rutan says this device is excellent for uncapping thin combs. The way to use this device, says Mr. Rutan, is to start at the bottom of the comb and with a light rotary motion from side to side work towards the top, grinding the capings to a foam.

The nail heads keep the uncapper from going too deep.

After uncapping a comb, the nails will get filled up with wax. This,

says Mr. Rutan, is an advantage, as it prevents the nails going too deep. The wax may be dislodged if desirable by tapping on the uncapping can.

New Jersey.

## California Bulletin on Bee Disease

Volume 17, No. 3, is a Monthly Bulletin, Department of Agriculture of State of California, and has as its subject, "Bee Diseases in California." The Bulletin gives a resume of the new California law adopted last year which places bee inspection in charge of Frank E. Todd, entomologist, in charge of apiary inspection, Bureau of Plant Quarantine and Pest Control.

There is an estimated loss from bee disease through death of colonies alone and loss of equipment of \$150,000 each year in California, besides the loss of the honey crop. The new law and the new effort is being made to eliminate this loss.

The Bulletin is occupied itself with giving characteristics of the disease, symptoms, causes, treatment, etc. It contains sixteen pages and is devoted almost exclusively to American foulbrood.

## If You Must Keep a Bee, Keep It Kind to Children

Appleton, Wis., May 4.—An appeal is being planned by the Wisconsin Beekeepers' Association against a \$10 fine by Judge Theodore Bergin in Municipal Court today on Frank Bauerfiend for keeping bees in the city limits in violation of an ordinance. H. F. Wilson, of Madison, secretary of the association, holds that Appleton's ordinance is unconstitutional because it declares bees are a public nuisance. Neighbors complained that Bauerfiend's bees were stinging their children.—Exchange.



## Some Inspection History

### How the Present Methods of Disease Control Have Developed in Michigan

By Russell H. Kelty

**F**OULBROOD eradication work in Michigan has passed through several rather well-defined periods of development since its inception in 1881. At that early date it was declared illegal to have in possession bees affected with foulbrood. Inspection was available on complaint of three beekeepers in any county to the probate judge, who in turn appointed an inspector to examine the suspected bees. If these bees were found to be foul, the inspector was entitled to \$2.00 a day salary from county funds, but if they were **not** diseased, then the complaining beekeepers must pay the inspector's salary!

In 1901 an appropriation of \$500 was enacted, the inspector being under the supervision of the Dairy and Food Commissioner, salary \$3.00 per day. At that time the inspector traveled about on a bicycle, doing as much as might be expected with the funds available.

In 1913 apiary inspection was placed in charge of the State Board of Agriculture at Michigan Agricultural College, with an appropriation of \$1500, which was increased to \$3000 in 1917.

At that time the inspector went to those beekeepers who asked for inspection, usually spending a few days in the immediate vicinity trying to run down the foulbrood in neighboring apiaries. Beekeepers were allowed to treat their diseased colonies within a given time, usually ten days, while the inspector moved on to a new location, maybe forty

miles away, to repeat the operation. He was supposed to return in ten days, but was seldom able to do so. If he happened to return the next season, he might find that disease conditions were as bad as ever, or worse, due to carelessness or negligence on someone's part at the time of treating or storing foul equipment.

It was realized by all that there was no hope of really eradicating foulbrood under such procedure, and the slogan, "Every beekeeper his own inspector," was adopted. The idea was splendid, but it did not get rid of foulbrood. So a campaign was organized to secure more funds to cope with the problem. The result was an appropriation of \$10,160 in 1919. With this fund available, a plan of organizing inspection work by counties was inaugurated making it possible for county inspectors to spend from five to twenty days in their respective counties.

Even this "lavish" expenditure of time and money made only a modest impression on the foulbrood situation, with no immediate prospect of ridding the state of foulbrood, so legislation was secured enabling county boards of supervisors to appropriate additional funds for foulbrood eradication, if they saw fit. At first the county boards were slow to react, but organized beekeepers' associations in several counties secured sums ranging from \$50 to \$400, to be matched by like amounts from the state appropriation.

In July, 1921, administration of

apiary inspection was removed from the college and placed in the Department of Agriculture at Lansing. At that time, also, the plan of work was changed materially in two ways. In the first place, previous to 1921, inspectors worked in close cooperation with local beekeepers of the district. It was customary for the beekeeper to take the inspector in his auto and go with him about the district to point out the neighbors having bees. For his kindness, the beekeeper often earned the everlasting ill-will of some neighbors who failed to see the spirit of the law, and who sometimes accused the state of trying to "put the little fellows out of business." The Department of Agriculture provided auto transportation for inspectors on a mileage basis, a great improvement over the former system.

The second, and by far the more important change of policy, was the adoption of the "area cleanup campaign" method of procedure.

It had become apparent under the old system of promiscuous inspection that without greatly increased appropriations, of which there was no immediate hope, definite progress was nearly impossible of accomplishment; for, even when a certain area had been cleaned up, the surrounding foul territory gradually overlapped the disease-free so that in two or three years conditions were likely to be as bad as before.

Since both the Upper and Lower peninsulas enjoyed isolation and protection by water on three sides, it was decided to commence in the north and work southward. The Upper Peninsula was soon cleaned up and by 1926 a good start had been made in the northern part of the Lower Peninsula. At the same time considerable work had been done in those southern counties which had appropriated money themselves. One of these counties, Oakland, appropriated \$1,000 the first year and \$800 the second for work within its own borders.

By the spring of 1927, the area cleanup had progressed southward into territory heavily populated with bees, which had received no inspection for several years. Inspectors reported such a heavy infection of foulbrood in some of the best beekeeping territory in the state that it was perfectly evident that in a few more years of neglect there would be relatively few clean bees left. And then the administration announced a slash in appropriations which would reduce apiary inspection to a near standstill.

Leading members of the Michigan Beekeepers' Association held a conference and decided that without a greatly increased appropriation to quickly clean up the uninspected portion of the state there would not be sufficient bees left in a short time



Sure cure for American foulbrood.



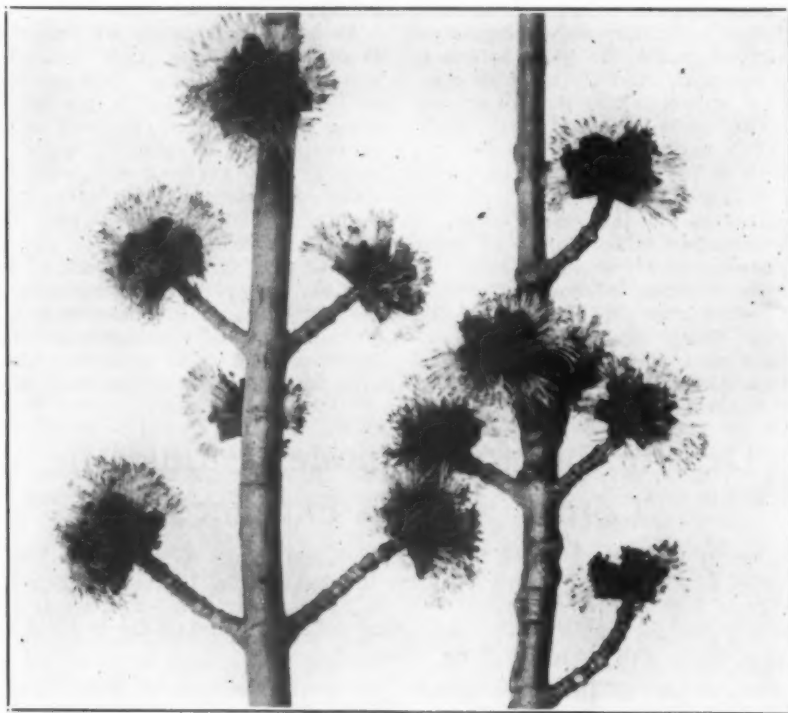
even to pollinize the seed and fruit crops. An appeal was made to the Governor and State Administration Board for enough funds to go over the remaining uninspected counties, strictly as an emergency appropriation to save an industry which was more important to fruit growers and seed producers than to honey producers themselves. Fruit growers and seed producers gave us their support in our plea to the Governor. We got the money. There was available for the fiscal year approximately \$40,000, marking a new era in foulbrood eradication progress.

To accomplish the greatest lasting benefit to the industry, severe treatment was ordered. The law provided for destruction by fire and burying of all diseased colonies, together with the hives and the honey. During the past season 8,603 diseased colonies were destroyed by inspectors. The law also declared cross-combed hives illegal, and had done so for years. Nevertheless, 12,045 cross-combed hives were found during the season, of which 2,223 were destroyed because the beekeeper chose to have the inspector burn the colonies rather than take time to transfer them to straight-combed hives himself.

Having served as an inspector under the old scheme of allowing the beekeeper to have ten days to treat his foul colonies, it was interesting to note the effect of the change in policy, and especially to study the reaction of beekeepers to the new order of things. When the beekeepers discovered that the inspectors were visiting every apiary in every section of every township in every county, giving all beekeepers, large and small, the same treatment; even when complete destruction of foul colonies, honey and equipment seemed harsh, the fact that everyone was being treated alike, and also the fact that when the district had been cleaned up thoroughly it would be kept clean by quarantine, was, in many cases, encouraging to even heavy losers. Often the beekeeper having a small investment protested more than the one with a large outfit.

Some of the extensive producers, however, had reached a state of mind such that they felt that foulbrood was there to stay, and, no matter what might be done, they expected to be bothered by a recurrence of a certain amount of foulbrood each year. When the chief Apiary Inspector told these men that they had one season to clean up before the area cleanup reached them, and that after that period of grace all foulbrood found in their apiaries would be burned by the inspectors, miraculously the foulbrood disappeared, or at least diminished to, say from 2 to 4 per cent infection compared with the yearly 10 to 15 per cent

## Honey From Maples



The maples are among the most widely distributed sources of nectar known to American beekeepers. Some species are found in Canada, some in Mexico, and probably there is no state in which one or more varieties is not known. Common from Maine to California and listed as important everywhere, yet who ever heard of maple honey in the market? Where there are large areas of maple forest, the blossoms open so early in spring that the bees are weak in numbers and the weather is chilly and uncertain. It is impossible to estimate the value of the maple trees to the bees, since the nectar nearly all goes to feed the hungry larvae and is seldom stored in the supers.

The picture shows the blossoms of

the soft maple, also known as white or silver maple, *Acer saccharinum*. This species is very common over a wide area and is one of the main sources of early nectar in the Middle West. The blossoms open in March and supply the bees with welcome nectar and pollen as soon as they can find days warm enough to fly. Cases have been reported when the hives on scales gained a pound or more in weight from maple bloom when the ground was still covered with snow.

A few cases of surplus honey stored from the vine maple have been reported from Oregon, but usually the bee men state that, because of uncertain weather at time of blooming, most of the nectar is lost.

F. C. P.

found previously in some cases.

The fact that all disease was destroyed by the inspector the same day it was found, unless the job was large enough to require two or more days of burning—and there were several of these big jobs, too—is one reason for the success of the campaign. When the inspector enters the apiary he assumes control of the situation and does the work himself as it should be done. No supers of honey from foul colonies are saved for marketing or, worse yet, for gifts to neighbors who may unintentionally expose the honey to clean bees. No more is foulbrood “shaken” about the apiary. It is promptly and immediately disposed of, after the bees have received the “coupe de

grace” of some cyanogas, by burning in a hole in the ground, even the ashes being buried beneath the plow line.

Of course, the inspector must be tactful and diplomatic and explain the requirements of the law, the importance of doing a clean job and the need for the cooperation of every beekeeper to make the state of Michigan safe for beekeeping. After such an approach, few offer objections. Those who do are given every opportunity to see the light before prosecution is started. When arguments will not prevail, a visit to court has always brought results.

A stock excuse, that we will always have foulbrood while there are bees in the trees and houses, is being



silenced by forcing removal or sealing of all such wayward colonies that can be found. Careful rechecking of territory the second year to destroy incipient cases that were dormant or indistinguishable the year before is also essential. And by the third year, if the inspector has done his duty the two years previous, little foulbrood remains. This has been the history of the area cleanup in northern Michigan, and will, we are certain, repeat for the entire state.

It certainly takes money to carry on such an extensive campaign. But it is the cheapest method in the end; for, under the old plan of ten or fifteen years ago, the money expended on apiary inspection, judged by the progress made in foulbrood

eradication, was largely wasted. By the present plan we can point to definite progress and accomplishment yearly.

In brief, the history of foulbrood eradication proves that foulbrood thrives on **tolerance**. Just so long as beekeepers choose to try to get along with foulbrood, devising means to keep bees in spite of foulbrood hazard, just that long will foulbrood tenaciously cling to that area, be it county or state. When the beekeepers have determined to get rid of foulbrood for once and all, by immediate, complete destruction, supported by adequate quarantine protection to prevent recurrence, then will foulbrood take its proper place with the dinosaur and the dodo bird.

## Department of Agriculture's Attitude on Corn-Sugar Bills Explained

Director of Regulatory Work Says the Food and Drugs Act Is Not a Farm-Relief Law—Gives His Opinion That the Legitimate, Honest, and Proper Way to Extend the Use of Sugar Made From Corn Is to Advertise It and Familiarize the Public With It and Thus Create a Demand for It Upon Its Own Merits and Under Its Own Name.

**W. G. CAMPBELL**, director of regulatory work of the department, under whom the food and drugs act and other regulatory acts are enforced, has written the following letter to the director of a laboratory of one of the large universities, in response to a request for a statement of the department's attitude with reference to legislation on the subject of corn sugar now pending in Congress:

### The Letter

"The department, in so far as the food and drugs act is concerned, does not regard corn sugar as other than a wholesome food product. . . .

"Since corn sugar is not regarded as an 'added deleterious ingredient,' and is not unwholesome in the sense that it is unfit for food because decomposed in whole or in part, the pertinent portion of the act which would apply to its sale is that which requires the marketing of all food products in a manner which avoids the creation of false and misleading impressions. Expressed in another way, this merely means the observation of decent, honest practices and presumes that the consumer is entitled to some degree of consideration. Whether objection is based upon the probability of the use of corn sugar as an adulterant for cane sugar, or upon its use in the manufacture of jellies, jams, marmalades, and the like, the principle is the same. Where the consumer has a definite conception of the character and composition of certain food products, deception occurs when a sale is effected of an article of an entirely different composition, unless the la-

bel contains statements which would thoroughly acquaint the consumer with this change. I have no objection to the use of corn sugar as such or as an ingredient in food products. I do object, however, to the sale, either as an unmixed article or as an ingredient in food, of corn sugar, or cane sugar, or any other product, when the consumer expects to get something else. My objection to this amendment is not due to any hostility toward corn sugar. I do object to the scrapping of the preeminent principle of this statute, which requires honesty in the marketing of all foods. To suspend the application of the terms of this law to foods containing corn sugar is to legalize with respect to such articles their sale in a false and misleading manner. It seems to me that before fraudulent practices are legalized a definite determination of the emergency which justifies that course, if it can be justified, should be made.

"This legislation is advanced as a farm-relief measure. The food and drugs act is not a farm-relief law and amendments to it should not be considered on that basis. The Corn Products Refining Company claims that with the passage of the amendment an outlet for not to exceed 20,000,000 additional bushels of corn would be created. When we bear in mind that the average crop will be approximately three billion bushels, you can determine very readily the extent to which this measure would influence the price of corn on the assumption that the farmers of this country alone would derive full benefit from it. Such advantage, however,

must be discounted by the knowledge that the Corn Products Refining Company last year and in preceding years imported large quantities of Argentine corn and in all probability will do so in the future, whenever the price differential justifies it. To my mind the legitimate, honest, and proper method of extending the use of corn sugar is to carry on a campaign of advertising, to acquaint the public with the uses to which the product can be put, and in this way create a demand for it. After it shall have become popularized the argument now made that a declaration of its presence on the label of a food product which contains it as an ingredient stigmatizes that product can no longer be seriously asserted. Should a practice established by popular consent, resulting in the preparation of food products with corn sugar instead of with cane sugar or some other sweetening agent, develop to a point where the public could expect corn sugar to be present, then the deception which exists under present circumstances would not obtain. There is no necessity for the declaration of corn sugar as an ingredient in prepared articles of food in which corn sugar normally is used and the public understands that to be the case."—Official Record Department of Agriculture.

## Will a 'Possum Eat Bees?

By George W. Pillman

We cannot positively say yes, or no; but from the evidence of a recent experience with an enemy of bees, we are inclined to believe that there is such a thing as a 'possum eating bees:

About a month ago, in walking through my bee yard, one morning, I found the ground before most of my hives literally covered with small cuds of chewed-up bees, denoting that something was after them. The cuds were about as large as the end joint of one's little finger, and from the evidence lying about, I deduced that the thing that was feeding on my bees must have chewed up not less than a full pint of them from each hive visited. And as the number of bees that I lost over night would perhaps total a three-gallon water-bucket full, you can believe that I was somewhat appalled at the wholesale slaughter.

On viewing this, the thought came over me that some terrible new bee enemy must have come into existence, and at the same time I concluded that, if I did not at once put a stop to the massacre, I would not have enough bees left by spring to form a three-frame nucleus.

So, acting on the impulse of the thought, I set out some steel traps before the hives, wherein a morning



or so after I found a small 'possum, which I promptly dispatched.

But then, in thinking that the 'possum might have just strayed into the trap and that the catching of it might have been a case of circumstantial evidence, I left the traps before the hives to see what next might happen. But I have seen no fresh evidence of any visiting enemy of bees, so I am prompted to believe that there is such a thing as a 'possum taking to eating bees; for, we might ask, if this was the work of skunks, would these visits have ceased at the same time as the catching of the 'possum?

Though I have had some little experience with skunks visiting my yard, the only evidences I ever noted of their visits were the scratch marks on the ground, which were entirely absent in this particular case. And again, we are almost sure this was the work of the 'possum I caught in the trap, because I never witnessed any evidence of such appalling loss before, in the fifteen years that I have been keeping bees.

As the mystery of my experience is still open to question, I now regret that I did not hold a post-mortem over the carcass of Mr. 'Possum and find out what he had in his stomach. Missouri.

## Moving Bees

I read with a good deal of interest the article, "Safe and Easy Method of Moving Bees," in your April issue, and I can commend it because I have been using it myself for three years.

I have one further suggestion to make from my experience and one criticism from our friend Dodge's excellent article. The suggestion is to use wire-screened bee escapes in place of making special screens. The bottom one can be turned upside down and it provides ample ventilation without the expense of extra equipment. I am assuming that the modern beekeeper uses the screened bee escapes.

The criticism is where he says, on page 183, "Let the hives stand for a while to allow the bees to settle down, but this precaution is not necessary if immediate finish of the job is desired." My experience is that they have to stand for a **long while**, unless you want utter confusion in the yard, because the bees boil out so the minute you lift your hive off that they take no time to mark their location. From my own experience I would say, leave them there till early next morning or late at night, but if you must unpack them at once give them a liberal sprinkling of water before you attempt to remove the bottom screen.

H. Davison Pickett, Canada.

## How We Bettered Our Conditions for Beekeeping

By T. T. Gorsuch

When we started keeping bees, about ten years ago, section comb honey was finding a ready market at 30 cents. We paid \$20 for two colonies of bees and all the necessary equipment of a small apiary, and from them that fall sold \$26 worth of sections.

There were a great many tulip, or poplar, trees and in the spring the headrows were white with locust blooms. There were also a great many careless beekeepers, all of whom, like ourselves, had come into the business at the height of the war boom, and many of them could not even tend to their bees themselves, but had someone to put the supers on in June and take the honey off in September. In this way, they managed to get enough honey in good seasons to keep the price down. By the spring of 1923 we had increased our colonies to twenty-one, and that fall we took off over 700 sections. The best comb honey sold at 10 cents that year and we could not get ours out at that until the spring of 1925.

With the cutting of the poplar trees for pulp wood, and the locust trees for posts to help the farmers' dwindling budget in 1924, these careless beekeepers, as well as ourselves, found themselves in a predicament. Almost everybody wanted to sell out, and nobody wanted to buy. There was almost no honey that year. The more careful beekeepers doubled their colonies by putting one hive on top of another and thereby reducing their colonies one-half. The careless ones let all their poorer colonies die off. But the country was still greatly overstocked.

We met the emergency with several hundred pounds of granulated sugar, and sold a lot off at \$6 a colony in the spring. They were all in standard hives with two comb-honey supers each, but we were glad to get them out of the neighborhood, as they went to another county.

I now reduced our remaining colonies to five by uniting. In this way we managed to get about 300 pounds of dark extracted honey, and when we had cut up the combs and melted up the wax we found that the wax had averaged 11 cents a comb.

This started us thinking. Here was a country overrun with bees, many of them in boxes and all of them for sale, and we had averaged \$2 for honey and \$1 for wax from each of the hives that I had doubled up. Bees went into winter quarters very light that fall and but few of them came through the winter. A farmer that had robbed too closely

lost eleven out of twelve, and the average losses for the neighborhood were about three out of five. Nature, the great self-cure for so many epidemics, had almost eliminated the careless beekeeper.

We bought out several apiaries that spring, or rather the remains of them, at from one to three dollars a colony for the live ones, and melted the wax out of the dead ones by the tubful. At the end of the white clover flow, which is about the last week in June in these parts, I ran the bees out of all of these undesirable hives into the colonies we meant to keep, forcing the bees to pass through an excluder and killing off the queens and drones.

Of course this honey could not be extracted, as most of it was not in frames, but when it had been drained out and fed back to special hives of bees fixed for this purpose, they made it into very nice comb honey. We have found that we can count on one dollar a hive for the wax. Out of one such hive we strained seven dollars' worth of honey, but such incidents are rare.

There are now twenty-two colonies in a section where formerly stood eighty-nine, and we sold all of our honey this year at 25 and 30 cents a section. At one time we could not have gotten 10 cents, and the other day we were unable to fill an order for three hundred sections at 30 cents each. The yield per colony is now nearly double. Maryland.

## Four Golden Lions and Bee Found in Tomb of Tut

By Universal Service to Washington (D. C.)  
Herald, Jan. 10, 1928

London, Jan. 9.—A massive bee supported by four lions and covered with beaten gold is included among the finds in the fourth and innermost chamber of King Tut-Ankh-Amen's tomb, according to a Westminster Gazette dispatch from Cairo. The find was announced by Howard Carter.

## Theft of Honey

Numerous reports of honey stolen from the hives are current this season. The latest is from Mr. W. Prowett, of Palmer, Nebraska, who reports the theft of 120 pounds of white honey from a hive about a half mile from his house. The frames of sealed honey were taken from the hive, resulting in the loss of the bees from cold.





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We have been breeding Carniolans for the past 21 years. Several breeders imported each year—Jan Strgar and M. Ambrozic stock. We have supplied queens to several Agricultural Colleges and Experiment Stations and to the Japanese Government for breeding purposes. We probably have the finest Carniolans in the United States. Ask for our free paper, "MERITS OF THE CARNIOLAN BEE."

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Untested queens, six	6.60
Untested queens, dozen	12.00
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Line bred breeding queen (reared 1927)	10.00

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## THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

### BEEES IN TOWN

Recently, in my locality, the police have begun a campaign to eradicate all beekeeping within the city. While it does not affect me directly, as I have hill locations, it has given me a lot of food for thought. I have observed the following:

To every commercial beekeeper there are in excess of ten back-lot beekeepers. Nearly all of these have from their own to six or more neighbors' children interested in bees, which to my way of thinking is one of the greatest means of advertising the truth about honey that exists.

Their numbers make them large consumers of supplies, subscribers to bee papers, members of bee societies, and like activities.

Doesn't it seem about time we got together and began some plan to remove these "bee ordinances?"

CALIFORNIA.

Answer.—The matter of city ordinances concerning the keeping of bees within a city has been settled long ago: Arkadelphia vs. Clark, 1899. See page 39, section 24, of "The Law Pertaining to the Honeybee," published by the American Honey Producers' League, at Madison, Wisconsin, in 1924.

The case in question was an ordinance by the city of Arkadelphia which was decided by the Supreme Court of Arkansas as unconstitutional, the court holding that bees might be decided to be a nuisance in individual cases where the damage done by them was proved, but that this would hold only against the individual apiary that had caused the damage, and that no ordinance could be legal that forbade the keeping of bees within the limits of a city.

I suggest that you call upon the police chief of your city and let him read this. It is not difficult for him to secure a copy of the book, or even a copy of the decision of the Supreme Court. This will settle the trouble.

Of course, if the bees of a certain apiary sting the neighbors and this is proven, they may be ordered removed, but it will serve only in that particular case. Bees are not a nuisance, and they are useful in the fertilizing of fruit blossoms, as is well proven.

### DADANT SYSTEM FOR 8-FRAME HIVES

Since an eight-frame Langstroth hive with half-depth super is equal in comb surface to a twelve-frame Langstroth or a ten-frame Dadant, why would not the same principles of management, as applied to the Dadant hive, such as abundance of super room, ventilation, shade, young queens, elimination of drone-comb, 1½-inch spacing of combs, etc., be equally applicable to this story and-a-half hive? My idea of this arrangement would be to place the super beneath the main hive body so as not to interfere with any manipulation of the main brood chamber.

Since most authorities agree that a congestion of the brood nest by young bees is one of the predisposing factors of swarming, would not this shallow super have a tendency to remove this factor without the juggling of full-depth hive bodies and frames, as is commonly practiced with Langstroth equipment?

COLORADO.

Answer.—Yes, certainly the way you suggest is the best method to follow with the eight-frame hive. But if you produce comb honey it might be still better to use two full stories, as Dr. Miller used to do, and remove one of them at the beginning of the crop, putting all the best brood combs in

the one that is left and using the other combs in weak colonies or to make increase. The objection to half-story supers, with eight-frame hives, is that the combs in them cannot be exchanged for combs of the full stories.

In the Dadant hives the super combs are never used for anything but the supers. But we never put the supers at the bottom. The queens prefer deep combs.

For swarm prevention, we need plenty of room, both in the brood chamber and the supers, plenty of ventilation, plenty of shade, a minimum of drones, and a young queen, not over two years old.

### PLANTS FOR POLLEN

Do you know of any plant that would be suitable for planting to produce pollen for bees in late summer and fall. This is a very peculiar location here in regard to pollen. If colonies are not strong enough to gather a surplus of pollen from dandelions in April or May, they are almost sure to die during the winter or spring, and making increase in this locality is out of the question. Is there any plant that you know of that I could sow an acre or two of that would give a little nectar and a great deal of pollen?

WISCONSIN.

Answer.—The only plant we know of that yields pollen plentifully in August-September is corn. The bees work on it considerably here in some seasons, even though there is little or no honey in it. But you have plenty of corn in Wisconsin, and if your bees do not harvest pollen from it, it must be that they are attracted to something else. I acknowledge that we have always found plenty of pollen harvested in the fall months from the different honey plants.

We were once in the habit of feeding our bees flour in early spring, as did Langstroth, Dzierzon, A. I. Root, Charles Dadant and others. But of late some of our scientists have made the assertion that brood starves when flour is used to make the pap for the brood, and we wonder whether our success in supplying flour was imaginary. Or perhaps it is as one of our French friends says, that the bees can use flour for the pap provided they have a small quantity of pollen to mix with it.

At any rate, if you cannot supply enough pollen, you might try the flour at such times as it is impossible for bees to find pollen in the fields.

### MARKING QUEENS

A short time ago I read an article, I believe in the American Bee Journal, which contained a recipe for marking queens so they could be easily found. Since reading it I concluded it would pay me to mark my queens when clipping, but cannot find the article anywhere.

OHIO.

Answer.—Queens are sometimes marked by using red or yellow dry paint dissolved with a little prompt drying shellac. With a very fine hair brush a small drop is put on the queen's thorax, and this makes her very conspicuous among the bees on a comb.

Queens are marked also by clipping one of their wings rather short. Dr. Miller used the clipping of queens not only to make them easy to see, but also to mark their age, as he used a different sort of clipping



every year for three years in succession, clipping one wing or both wings.

We have given at different times the methods of marking queens, but I am unable to find indications in the index of the past four years.

#### ALBINO BEES

Are the Albino bees as good in quality as the Italian? Are they hard to winter, or are they delicate about the stuff or flowers they work on? Are they as hardy as the Italian? If I should get an Albino queen and split up a hive of Italian bees and put her in the new hive of Italian bees, would the Italian bees accept her, or would they kill her? Would the whole soon be Albino bees? Where can you get Albino queens?  
SOUTH DAKOTA.

Answer.—The Albino bee is just a sport from the Italians, secured, as I believe, by too much in-and-in breeding. They have no qualities that the Italian bees do not possess and are not likely to remain pure. If you buy an Albino queen, you may insert her, as you enquire, in a division of an Italian colony and the queen will be accepted by the bees as readily as any other. As to their hardness I don't know. I would not bother with them.

#### TREATING FOULBROOD

1. Treating foulbrood, after the bees are left in a hive without comb for forty-eight hours, will it be all right to shake them into a hive containing old combs?

2. How long will combs affected with foulbrood have to be kept in order for the germs to die out so the combs will be safe to use again?

3. After the bees are shaken off the combs, what do you do with the combs on the young bees that come out later may be taken care of?  
VIRGINIA.

Answers.—It will be all right to shake the bees on old combs that are healthy, after they have been two days without food. The requirements are to leave the bees without food for forty-eight hours, so that they may digest all the honey that they have.

2. The combs that have contained diseased brood or honey are never to be trusted until they have been treated by the Hutzelman treatment, or the D. and B. formalin solution or some other equally efficient. Combs in which the disease existed years ago, if not treated, will prove as dangerous as combs with fresh disease.

3. We have been in the habit of destroying those combs, but some people place them in separate hives until the brood has hatched. This may do if you are careful not to give rise to robbing. There is always some danger in treating bees and combs; that is why some people are in favor of destroying hives, bees and combs.

#### CONCERNING M. D. HIVES

A few questions concerning the Modified Dadant hive:

1. Do you ever have to use two hive bodies on your modified hives, to give the queen room in the spring, or is one modified body sufficient for stores and brood?

2. Do you have to feed much in the spring, or will the single modified body hold plenty of stores if crowded properly in the fall?

3. Do Lewis Beeware people manufacture metal-spaced frames for the Modified Dadant hive?  
OHIO.

Answers.—1. No, we never have to use two bodies for brood, as one body is large enough for the queen's brood. We use half-story supers for the surplus honey. When fall comes there is less brood, and if the bees store their honey properly there is plenty for winter in the brood chamber.

2. If we produce extracted honey and are not careful to crowd the bees a little in the fall they may not store enough for the en-

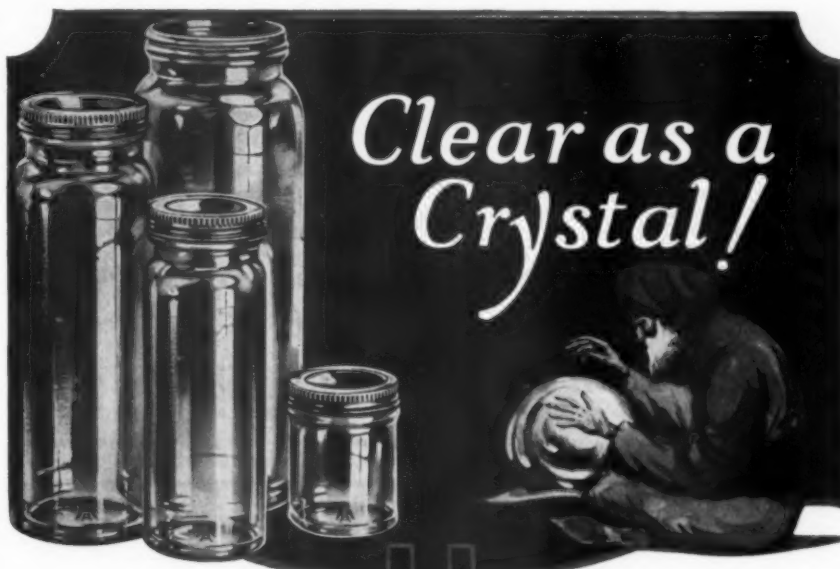
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tire winter and spring, in the brood chamber; in that case we have to feed. If we produce comb honey, the bees always store plenty around the brood to last them till the next crop, except in extraordinary cases.

3. Metal shoulders are made for extracting frames. I suppose they could be used for brood frames, but I do not see the need of them.

You should not have any space large enough for the bees to build drone-combs in any of your hives.

### USING WAX FROM A. F. B. COMBS

I have wax that has a little wax from American foulbrood. Will that be all right, or not, to use to fasten extracting foundation with? Let me know if I can use it. If not, is there any way you can use it?

KANSAS.

Answer.—If the beeswax has been rendered the usual way and boiled with water, there is no danger whatever. If you have any doubt, boil it again over water, taking care not to let it boil over.

### HONEY IN COPPER TANK

I have a 100-gallon copper tank that I intended to use as a honey tank. Would there be any danger to the honey from coming in contact with the copper?

OREGON.

Answer.—There is not likely to be any harm in putting honey in a copper tank, if the honey is well ripened and not likely to ferment. But if honey is to be kept several months, I would not recommend using a copper tank. You could probably have it coated with tin, without very much expense.

Sugar syrup is much more likely to cause trouble, when used in copper, than well-ripened honey. We have often kept honey in tin for several seasons without trouble, while keeping sugar syrup in a similar vessel would cause it to rust.

### DRONE-LAYING COLONY

I have a stand of bees, wintered in two ten-frame hive bodies, that has drone brood, nearly full frames, six or seven of them. What is the matter, and what should I do? I looked at all the frames and did not see a queen. Should I take out all this drone-comb and put in foundation? (I have plenty.)

I attended all sessions of the bee meeting at Hamilton last year and enjoyed myself very much.

INDIANA.

Answer.—If the brood is in drone-combs, it is quite probable that there is an old, drone-laying queen in the hive. You should be able to find her.

If the drone-brood is in worker-cells, then there is probably no queen, but drone-laying workers. In that case it will be difficult to save the colony, unless you give it both bees and brood, so they may rear a young queen.

If there is any drone-comb in the hive, it should certainly be taken away and worker-comb foundation given in its stead. It pays to do it.

Glad that you had a good time at Hamilton. We had a good time ourselves and have made many new acquaintances.

### USE OF OLD EQUIPMENT

I have just purchased a number of used hives and supers, and some of them had combs in them. These combs mostly all have some capped cells which are badly scattered, and when opened appear to be empty. There is no odor present at all. Would you please give me your idea on this and let me know where I could send one of these combs to be sure as to what is the matter with them? They are six years old.

ILLINOIS.

Answer.—The safest thing to do would probably be to render those combs into wax and exchange that wax for comb foundation, singeing the frames and the hives before



using them. But you might first send one good sized piece of comb to James I. Hambleton, apiculturist, Bureau of Entomology, Washington, D. C. He will tell you whether they find disease or not. If disease is found, you must render up those combs into wax. If no disease is found, it may be safe to use them. It looks very suspicious.

#### PERSISTENCE OF FOULBROOD

If American foulbrood is in a hive and the hive is scraped out with a knife and stored in a dark room how long will American foulbrood stay in a hive? Will sun kill foulbrood? IOWA.

Answer.—You cannot get rid of foulbrood by scraping the hives or putting them in the sun, or leaving them empty for several seasons. It is necessary to singe them, either by painting them with kerosene and setting fire to them, extinguishing the fire after a few minutes, or by singeing them with a tinner's torch, which you can probably borrow from the tinner in your town.

#### Low Prices for Honey

Much has been said in our journals of late about price-cutting beekeepers. Some of our largest producers are price cutters, so why should the small producer be given most of the credit for it? They should be named "Hit and run beekeepers."

There are many carloads of honey coming into the Seattle market and it is being sold at a very low price; in fact, there is no place in the country where it is being sold so cheaply.

November and December past, a five-pound pail retailed for 55 cents, and a ten-pound pail for \$1.15. At this time, March 21, a five-pound pail retails in the chain stores for 69 cents, and a ten-pound pail for \$1.29, and this honey is being put up not only by some of the bottlers, but by our beekeepers' organizations. What the beekeeper will get for his honey remains to be seen, although at the prevailing prices I think there will be disappointments.

We should ship our honey to any part of the country we wish, but we should be assured of a price commensurate with the prices on other commodities, whereby we could get something for our labor and money invested, and when any organization does not work for the interests of the brothers of the fraternity, they should take down their shingle and go out of business. It would be better for all concerned.

George A. Ferguson,  
King County, Wash.

#### Candy from Honey

The Wisconsin Beekeepers' Association recently passed a resolution calling attention to the possible development of a large demand for honey for use in candy making. It was recommended that this matter be called to the attention of every agency interested in the welfare of the industry.

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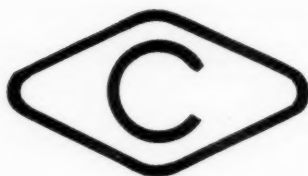
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## Meetings and Events

### **Eighth International Congress of Apiculture at Turin, Italy—Program, Sept. 10-17, 1928**

September 10, 3 p. m.—General meeting for the opening of the Congress. Separate delegate meetings in the different Languages.

September 11, 9:30 a. m.—Discussion of the first question: Artificial rearing of queens of the different races of bees, especially the Italian bees. Most efficacious methods for selection of the race, for beauty, gentleness and prolificness.

3 p. m.—Continuation of the above subject.

September 12, 9:30 a. m.—Second question: As resolved at Quebec Congress, what are the propositions desired to be suggested to the different governments in order to control the diseases of bees and of brood, to prevent the sale of infected material or colonies, as well within the states as between the states.

3:15 p. m.—Continuation of the above subject.

September 13, 9:30 a. m.—Discussion of the main diseases now existing among honeybees.

3:15 p. m.—Continuation of the above subject.

September 14, 9:30 a. m.—Full meeting with presentation of different conclusions to be brought forward in the shape of resolutions.

Nomination of officers and especially of a general secretary to replace the one now in office, who desires to withdraw from apiarian work.

Discussions concerning the organization of the next Congress.

September 15-16—Visits and excursions to the general exposition, to apiaries, to interesting spots of Turin and its environs.

An additional program will be supplied later to all the members.

In the intervals of the seances, practical experiments will be made on the methods of treatment of diseases and on the different breeding methods. These experiments will also display the particular characteristics which are shown by the Italian bee in different regions.

The Congress will be held under the high patronage of the King or of a member of the royal family and the honorary presidency of His Excellency Mr. Mussolini.

The members of the Congress will be entitled to the reductions given by the railroads to all the manifestations of Turin.

Moderate prices will be furnished by hotels of first and second grade. Prices will be quoted later.

It is expected to close the Congress on Sunday, September 17, at Rome.

Turin, royal land hospitable city,

will do honor to the members of every nation, with receptions, theatrical representations, conferences, useful and diverting excursions.

The President,  
Edoardo Perroncito,  
Turin.

The Secretary-General,  
Leon Tombu,  
185 Rue Gaucheret,  
Brussels, Belgium.

Notice: Membership in the Congress is fixed as follows:

For all Europe, except Italy: Government, 50 francs; associations, 50 francs; protecting members, 20 francs; active members, 10 francs.

United States and Canada: Government, \$10.00; associations, \$10.00; protecting members, \$4.00; active members, \$2.00.

Registration and payment for all countries should be sent to the Secretary-General as early as possible.

### **Tri-State Meet, Dubuque**

The interstate beekeepers' meeting will be held this year at Dubuque, July 25-26. This circuit of states includes Wisconsin, Illinois, Iowa, and Minnesota. Many beekeepers will recall that two years ago a meeting was held at Platteville as a Dand memorial meeting. Other beekeepers will recall the wonderful meeting at Hamilton, Illinois, last year, which attracted visitors from many states. It is hoped that the beekeepers of Iowa will support the meeting this year by attending it and enjoying the programs in which all the respective state associations will be represented by their chairman. These programs will be in the following order: Wisconsin during the morning session of the twenty-fifth; Illinois during the afternoon session of the same day, with the Minnesota program during the forenoon session of the twenty-sixth, followed by the Iowa program in the afternoon session of the same day. It is yet too early to make definite arrangements in regard to the program, but everyone who attends will be assured of a very fine group of speakers and plenty of opportunity for round table discussion.

The local arrangements are in charge of G. H. Ohmert, Wartburg Place, Dubuque, Iowa. The session will undoubtedly be held at Eagle Point Park, which overlooks three of the states of the circuit, has plenty of pavilion room, tourists camps and other necessary comforts. If there are any questions regarding local facilities, you may have them answered by writing to Mr. Ohmert, but you may be assured that they will be ample and convenient. The beekeepers of Dubuque county have a high reputation for hospitality and

## **Golden Northern Bred Queens**

Write for Prices for Spring Delivery  
**HERMAN AHLERS, Astoria, Oregon**

## **BEE PARADISE**

Minnesota and North Dakota lead in the production of sweet clover seed. Acreage increasing rapidly. In six counties in northeastern North Dakota there are about 122,000 acres of sweet clover. Climatic conditions are extremely favorable for bees; warm summer days and cool nights. Write for FREE BOOK on agricultural resources of Minnesota and North Dakota. LOW ROUND TRIP EXCURSION RATES.

**E. C. LEEDY**

Great Northern Railway, Dept. J-2  
St. Paul, Minn.

## **SUNNY LAND ITALIAN QUEENS**

**50c EACH, Any Number**

Requeening time is now on. Our Queens meet your needs. Vigorous, beautiful and gentle. Disease resisting and hardy enough for the Northern climate.

During the Summer and Fall months we expect to ship 5000 Untested Queens. With this capacity, priced as we are offering them our Queens will head many colonies that make a fine crop of honey for 1929. Your patronage solicited. We guarantee to please you perfectly or refund your money.

**CRENSHAW COUNTY APIARIES**  
Rutledge, Alabama

## **RED STICK**

**PURE ITALIAN**

## **QUEENS**

**50c**

**ANY NUMBER**

Time has told — that legend old:

"When queens and bees are better than these  
RED STICKS will lead in bettering the breed."

We mean this more and more each year.

With our low price and the heavy producing record of our queens, everyone can requeen each colony every year. This means more honey and safe wintering.

We will operate more than 1,000 standard three-frame mating nuclei for the balance of this season.

Clipped free on request. State health certificate sent with each order. 100% satisfaction and pure matings guaranteed. Last year our pure matings were better than 98%. Get our circular and learn why our queens hold the front rank.

## **RED STICK APIARIES**

**BATON ROUGE, LOUISIANA**



50c

Select untested Italian Queens, Fifty cents each any number after July 15th. Pure mating, safe arrival and perfect satisfaction guaranteed.

# THE CROWVILLE APIARIES

J. J. SCOTT, Prop.

Crowville, La.

## HODGSON'S RADIAL HONEY EXTRACTOR

is just right for a portable extracting outfit. Its light weight (240 pounds), and the fact that the smallest gasoline engine will run it, make it the best portable power machine made.

Manufactured by

**S. P. HODGSON & SONS**

NEW WESTMINSTER,

British Columbia,

Canada

## THE HONEYBEE

Written originally by L. L. Langstroth, rewritten by Charles Dadant and C. P. Dadant, is now in its twenty-second edition. Successful beekeepers use this book as an aid in their daily problems. The teachings of Langstroth and the experiences of the Dadants compiled in this book make it a volume of constant reference.

Price \$2.50

**American Bee Journal**

Hamilton, Illinois

## SHAW'S BEES AND QUEENS

Are seldom equaled  
and never surpassed

*They are bound to give satisfaction*

I have a breeding queen now making her fourth season as a breeder. She started the season laying strong; soon went to laying scattering eggs, and now they are trying to supersede her.

How many have you in this shape.

Let Shaw's young Queens take their place.

Three-band Italians, any number, 50 cents each.

**A. E. SHAW**

SHANNON, MISS

will be responsible for assisting in the local entertainment of all visiting beekeepers. Make your arrangements now to attend this meeting and to stay for the two days. At present there are some detours in the highways leading to Dubuque, but the information obtained at this writing indicates that the detours will be opened and the main roads will be available for traffic by the time of the meeting.

### Iowa State Fair

Your attention is called again to the Iowa State Fair, which will be held August 22-31. It is to be hoped that a large number of beekeepers will avail themselves of the opportunity for entering honey at the fair. The list of exhibitors has been increased slowly each year, but we need many more entrants in order to build up the department and to receive additional assistance from the fair management. Mr. Paul P. Stewart, of Maynard, is superintendent of the department, with A. D. Worthington, of Ames, in immediate charge of exhibits. It is not necessary for the exhibitor to accompany his entry, but it may be consigned to Mr. Worthington, who will exhibit it and see that it is presented to the judge for scoring.

It is the plan to use the grade developed by the Government in making the awards in this department this year. These grades are established and explained in Circular 27 of the United States Department of Agriculture. This bulletin can be obtained free upon request by writing to J. I. Hambleton, Washington, D. C.

### Seventh Mid-West Exposition

Plans are developing for the seventh Mid-West Horticultural Exposition, which will be held this year in Cedar Rapids, November 24-27. This great exposition includes all horticultural and allied products and exhibits are made in the honey department from any state in the Union. Under these conditions it is expected that competition will be very keen, but in the past it has been possible for Iowa honey to meet any and all competition. It is expected that the beekeepers of Iowa will do as well this year as in the past, and it is hoped that we will have still more entries.

A copy of the premium list can be obtained by writing to R. S. Herrick, State House, Des Moines. The cash premiums in the department are very liberal and should be attractive to any beekeepers any place in the United States. It is possible to consign honey to the department with the assurance that it will be displayed and presented to the judge for scoring. Beekeepers should make their plans now to enter honey, and

during the season they should be alert to obtain honey which can be entered at this show.

### Next League Meet at Sioux City

Word has just been received from the President of the American Honey Producers' League that the vote of the directors indicated the selection of Sioux City, Iowa, as the meeting place for the next session of the League. Iowa beekeepers will rejoice at this news and will appreciate the work which has been put forth by the officers of the Beekeepers' Association in their effort to bring this national meeting to their state. Plans will be started at once for the program, which will be given in January or February, 1929. When the meeting was held at San Francisco the attendance was very large, with many states represented. We are sure that every alert beekeeper will want to attend this meeting of our national organization.

### Beekeeping Short Course, College of Agriculture, University of Missouri

A beekeeping short course will be held at the College of Agriculture, University of Missouri, July 16-18, 1928, in cooperation with the Missouri State Beekeepers' Association.

#### July 16—Morning Session

Dr. L. Haseman, professor of entomology, chairman of the Department of Entomology, presiding.

9:00—Registration.

10:00—Welcoming address, F. B. Mumford, dean of the College of Agriculture and director of the Agricultural Experiment Station.

Response, Arthur Allen, Missouri State Apiarist, Liberty, Mo.

10:30—Dr. L. Haseman, "The Beekeeper and the College of Agriculture."

11:00—Dr. E. F. Phillips, professor of apiculture, Cornell University, Ithaca, N. Y., "Causes of Bee Diseases."

#### Afternoon Session

Dr. K. C. Sullivan, assistant professor of entomology, presiding.

1:30—J. V. Ormond, Secretary American Honey Producers' League, Little Rock, Ark., "The Package Bee Industry."

2:30—Miss Jessie A. Cline, associate professor of home economics, University of Missouri, "The Utilization of Honey in Foods."

3:30—Dr. K. C. Sullivan, "Insect Enemies of the Honeybee."

#### Evening Session

Dr. Leonard Haseman presiding.

7:30—Arthur Allen, Missouri State Apiarist, "Bee Inspection."

8:00—Dr. E. F. Phillips, "Beekeeping Throughout the United States."

#### July 17—Morning Session

Arthur Allen presiding.



9:00—T. J. Talbert, professor of horticulture, chairman of the Department of Horticulture, "The Economic Importance of the Honeybee to the Fruit Growers."

10:00—Francis Jager, professor of apiculture, University of Minnesota, "Developing and Managing the Apiary."

11:00—Dr. E. F. Phillips, "Symptoms and Treatment of Bee Diseases."

#### Afternoon Session

Dr. Leonard Haseman presiding.

1:30—C. A. Helm, associate professor of field crops, "Nectar-Producing Crops."

2:00—Dr. W. A. Albrecht, associate professor of soils, "The Chemistry of Honey."

2:30—Francis Jager, "Queen Breeding and Race Improvement."

3:30—W. L. Flannery, Agriculture Extension Agent, Missouri and North Arkansas Railroad, "Importance of the Honeybee in Pollenization."

#### Evening Session

Dr. K. C. Sullivan presiding.

7:30—J. V. Ormond, "The Work of the League."

8:00—Francis Jager, "Beekeeping in Europe."

#### July 18—Morning Session

Arthur Allen, presiding.

9:00—Dr. R. L. Parker, associate professor of entomology, Kansas State Agricultural College, Manhattan, Kansas, "Grading and Marketing Honey."

10:00—Dr. E. F. Phillips, "Colony Morale."

11:00—Dr. L. Haseman, "Future Development of Beekeeping in Missouri."

11:30—Clay T. Davis, Secretary Missouri State Beekeepers' Association, Cameron, Mo., "The Work of the State Association."

#### Annual Tour, Illinois State Beekeepers' Association

The annual beekeepers' tour under the auspices of the Apiary Inspection Division of the Department of Agriculture and the Illinois State Beekeepers' Association will be held August 1-4.

The plans call for visits at the apiaries of prominent beekeepers along the route, with one or more programs on beekeeping subjects each day. The tour is to start at Bloomington and proceed via Chenoa, Chatsworth, Gilman to Buckley for an evening meeting on August 1. On August 2 the tour will continue to the university apiary at Champaign, thence to Monticello and Decatur. Moweaqua, Findley and Shelbyville, in Shelby county, Ohlman and Taylorville are scheduled for the third day. Springfield, Mason City, San Jose, Pekin and Peoria are to be visited on the last day, August 4. A

(Continued on page 366)

## ITALIAN QUEENS

For Summer and Fall Requeening

80c each; \$9.00 per dozen

R. E. LaBARRE, Box 1042, Tulare, Calif.

## Save Time -- Save Worry

Dadant's Wired Foundation

Can be nailed into Lewis Slotted Bottom Bar in a jiffy. And such wonderful combs!

Sold by all Dealers in Lewis Beeware and Dadant's Foundation

### BOOKING ORDERS

for high-grade three-banded Italian bees and queens: 2-lb. package with select untested queen, \$4.50; discount on quantity. Select untested, \$1.00, \$10.00 per dozen; select tested queen, \$1.50. Inspector's certificate with each.

J. ALLEN, Catherine, Alabama

## THE BESTO' BEE SUPPLIES

Largest stock in intermountain region of hives and other supplies, especially made for western beekeepers. Prompt service. We can save you money. Write now for illustrated price list. Our cooperative organization was founded in 1899.

The Colorado Honey Producers' Ass'n  
Denver, Colo.

## WHY EXPERIMENT

and take chances with just ordinary queens when the best cost so little. Our queens are well known for their hardiness, prolificness, gentleness, and honey-gathering qualities. Safe arrival and satisfaction guaranteed. Health certificate with each shipment.

One untested, 80c; twelve for \$9.00. One select untested, \$1.00; twelve for \$10.00. Tested, \$1.50; twelve for \$15.00.

Write for descriptive circular and prices on quantities

J. M. CUTTS & SONS

R. No. 1, Montgomery, Ala.

## REQUEEN NOW WITH HOLLOPETER'S BREAD AND BUTTER QUEENS

For practical beekeepers who make bees pay. Northern bred from hardy, prolific stock. Great workers.

One untested Italian queen, \$1.00; five, \$4.50; ten, \$8.50; twenty, \$16.00. Fifty, \$35.00.

Safe arrival and satisfaction guaranteed

J. B. HOLLOPETER

Rockton, Pa., L. B. 80

## Golden Queens and Banded Bees

Untested queens.....\$1.00 each  
Tested queens.....\$1.50 each  
Bees.....\$1.50 per lb.  
Nucleus.....\$1.50 per frame

Bees inspected; free from disease

J. W. SHERMAN, VALDOSTA, GA.

## NORTHERN QUEENS

That produce gentle three-banded, leather-colored bees. Unexcelled honey gatherers. Safe arrival and entire satisfaction guaranteed-

Untested, \$1.00

20 or more \$ .90 each

Tested \$2.00

HOPKINS APIARIES

WITHROW, MINN.

## GOLDEN QUEENS

Yes, and the best that are offered. Not one complaint from my many customers living in 33 states, but 100 per cent increase in business with them this year.

Single queens, \$1.00; two to nine, 80c each; ten to twenty-four, 75c; twenty-five and over, 70c each  
Tested queens, \$1.50 each

M. STEVENSON, Westwego, La.

## MOORE'S STRAIN

Away back in 1879 I commenced rearing Italian queens with the object of improvement constantly in view.

By careful selection during all these years I have succeeded in producing a strain of three-banded, leather-colored Italian bees, known as MOORE'S STRAIN OF ITALIANS, which has won a world-wide reputation for honey-gathering, hardiness, gentleness, etc.

Mr. A. K. Whidden, San Jacinto, Cal., says: "In 1913, 80 per cent of the bees in this district died of European foulbrood. I had an apiary of 60 colonies headed by daughters of your queens in which I did not lose a colony, and in 1914 they made 360 pounds per colony."

"In 1917 I bought 12 queens of you and introduced them to diseased colonies. Four of them became too weak to recover, and they all got rapidly worse until it looked impossible for any of them to recover. In eight of them, as soon as the young bees from your queens began to hatch, the disease began to disappear. They cleaned up and stayed clean."

I am now booking orders for June delivery or later.

Untested queens, \$1.00; 6, \$5.00; 12, \$9.00. Select untested, \$1.25; 6, \$6.00; 12, \$11.00. Safe arrival and satisfaction guaranteed. Circular free.

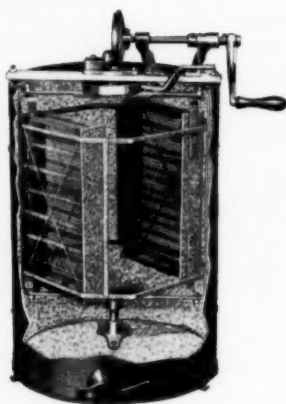
J. P. MOORE

MORGAN, KENTUCKY



# Beekeepers Save from \$10 to \$20 on Honey Extractors

*The Best on the Market at the Lowest Price*



The Superior two-frame Reversible Honey Extractors have no throw out clutch with broken gears. No mechanical handle release with wire spring and loose pin, but a simple automatic handle release worked by the turning of the shaft leaving the handle always idle while the reel spins. Our pockets are strong, rigid, and indestructible. Heavy ball bearings top and bottom, full flow honey gate. Reels are made of Galvanized steel, others use black steel painted.

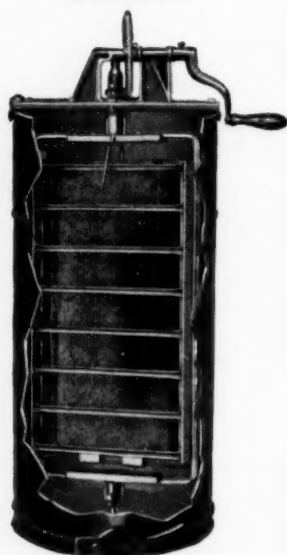
Sold on **Money Back Guarantee** backed by 56 years record for fair dealing. We sell only through Dealers but if your Dealer does not sell our Extractors we will ship you direct from the Factory at the following astonishingly low prices.

Size	Pockets	Ship Wt.	Price
No. 15	9 $\frac{5}{8}$ x 16	90 lbs.	\$23 75
No. 17	12 x 16	110 lbs.	28.75
No. 20	14 x 16	120 lbs.	33.75

You have always paid too high a price for Honey Extractors.

## Back Lot Single Frame Honey Extractor

BACK-LOT



Patent Pending

The *Small Beekeeper* has always wanted and needed a low priced Honey Extractor so that he can get full production from his bees. This can now be had for **\$8.15**

Not 100% perfect like the Superior Reversible but 98-3/10% by actual test.

Turn reel in one direction for 1 $\frac{1}{4}$  minutes and opposite direction the same time. A practically continuous operation. Don't have to remove comb until all honey is extracted. Every comb honey producer needs it for unfinished sections. Where Dr. Hutzelman's solution is used for curing foul brood it will save the solution which otherwise would evaporate. Gears and reel easily removed to use tank for bottling or honey storage. Made in two sizes.

Size	Pockets	Ship Wt.	Price
No. 3	9 $\frac{5}{8}$ x 16	25 lbs.	\$8.15
No. 7	12 x 16	30 lbs.	10.65

Beekeepers remember if your Dealer does not sell them send your order to us and we will ship promptly.

**Honey Storage Tanks.** Conical bottom, drained to full flow honey gate. Heavy galvanized steel throughout. Bottom and outside of tank heavily enameled. Malleable tinned drop handles. Built to last a lifetime.

Size	Ship Wt.	Price
No. 40— 40 gal.	55 lbs.	\$8.15
No. 60— 60 gal.	69 lbs.	10.30
No. 100—100 gal.	90 lbs.	13.10

## THE STANDARD CHURN CO.

*For 56 years building honest goods and giving fair, square, honest treatment*

WAPAKONETA, OHIO



## Crop and Market Report

Compiled by M. G. Dadant

For our July crop and market report we asked correspondents to answer the following questions:

1. How is the crop compared to last year?
2. What are the prospects for the balance of the year?
3. How much old honey left on hand?

### CROP

Usually by June 20 it is possible to give a fairly good summary of what the honey crop is in the entire South and also the northeastern and central states.

However, this year the season is so extremely backward on account of dry and cool weather that there are no reports coming from any of the northern or northeastern states, and many of the southern states are in a similar position.

Virginia and the Carolinas are reporting less than a normal crop. Georgia and Florida have had wonderful crops this year, except in some sections of southern Georgia and northern Florida. The crop in southern and central Florida especially has been phenomenal and, combined with a heavy fall crop last year, places the beekeepers in that section in a wonderful position.

Alabama and Mississippi had failures last year and are reporting fair crops this year, although unusually late. Louisiana is normal, as is Arkansas.

In Texas the crop is very much of a disappointment so far this year. There is possibility yet of a late mesquite crop, and of course the cotton crop of the northern sections of Texas will perhaps be normal.

The earlier crops in that state, however, are very much of a disappointment and probably will not be over 50 per cent of last year. This is due to the unusually poor condition of the bees earlier and the dry weather, which has not allowed the early mesquite bloom to materialize.

In Arizona and New Mexico the crop has been somewhere near normal, although late.

In the only other state where the crop may have been well developed so far, namely, California, the orange crop has perhaps been the equal of last year, and in some sections a little better.

The prospects for a later crop, however, have not materialized, as there was an extremely dry period in the spring and neither the honey plants nor bees have developed.

Rains in late May, although they helped in some sections, were not sufficient to make any material difference and California is reporting an even poorer crop than last year. Reporters with partial failure report total failure this year. The Imperial Valley, of course, will have its usual crop of alfalfa honey in the irrigated sections.

### CROP PROSPECTS

In our report above we have indicated that the honey crop, except in a few favored localities, so far has not materialized as the equal of last year.

The same holds true for prospects to come. The northeastern and New England states will probably be normal or a little above. The prospects are very much spotted. Ohio appears to be going to gather very much less honey than last year; Indiana is less than normal, and Illinois, although favorable in many sections, will undoubtedly be very much lower than last year, as will Missouri.

In Michigan and Wisconsin prospects do not seem nearly as good as last year, and even in Minnesota, where earlier prospects were favorable, the drouth has cut down considerably, so that it is not likely that more than last year's crop will be harvested. Eastern Iowa will be below last year, but western Iowa will be equal or a little better.

It is to the plains states, therefore, and the intermountain territory that we must look if we are going to have as large a total crop as last year, because practically all other sections indicate now much less honey than in 1927.

Prospects are unusually favorable in Nebraska and Kansas, unfavorable in Oklahoma, normal in North and South Dakota. Prospects are exceptionally favorable in

Montana and much more favorable than last year in Wyoming. The balance of the intermountain territory reports equal of last year, or perhaps a little better. It is yet too early to tell how conditions will develop, although many sections are suffering from a possible lack of water, unless heavy rains materialize.

All in all, we do not see how the honey crop this year can, under any conditions, equal the total of last year, owing to the probably much shorter crop in the white clover sections of the central West and East. Perhaps this may be made up by a larger crop in the plains states and in the intermountain territory, and it will have to be made up there if at all. The fact that California is again a disappointment this year will indicate that the total cannot very well exceed what it was in 1927, and may be appreciably below it. Under the conditions some reporters state they are glad of a small carryover of honey, because they want to supply their trade and expect as good or better price than they have been holding for this year. We are of the opinion that beekeepers who have held over a part of their crop for 1928 are not going to regret it.

### HONEY LEFT ON HAND

There is a negligible amount of honey left on hand in all of the eastern states, perhaps, except eastern Pennsylvania, where a larger than average proportion of the crop is still unsold. However, New York and the New England states report the honey crop more nearly disposed of than it has been in many years past.

The same is true of all the southeastern states, except Florida, where a heavy fall crop last year was largely carried over.

In the southern states there was no crop last year, and practically no carryover. Texas also reports the last year's crop as practically cleaned up, with very little left on hand and some of the 1928 crop already disposed of.

In the central western states, where the crop was unusually heavy, individual beekeepers have in some instances quite a good share of their crop left on hand, but all in all it is likely that not 10 per cent of the crop is left, and these beekeepers are fortunate in having it if conditions do not develop better than they are at present.

The plains states are well cleaned up, the intermountain territory has perhaps not over from 5 to 10 per cent left on hand, and the coastal states, of course, have been cleaned up long ago. All in all, there is probably as small a carryover of honey this year as there has been in many years.

Perhaps we have made our report of crop conditions too pessimistic and want to warn against jumping at conclusions that the total crop is going to be very small from what has been given above.

It is true that in many sections the season is abnormally late. Late rains and hot weather combined may put an entirely different aspect on the possibilities for a crop in the central western and eastern sections and may yet give a normal crop from what appears to only be a mediocre one.

The writer does not believe, however, that the crop will equal last year in the white clover sections, in Texas and in California, though perhaps partially made up by the irrigated sections, the plains states and some sections of the Southeast.

From indications now, however, it does not appear that the honey market should start lower than it did last year, and in fact there should be an appreciable stiffening of jobbing prices, and undoubtedly much of the cut price retail agitation of last year will disappear this year. It is at least to be hoped so.

Undoubtedly the excellent working of the cooperative associations in the West, together with such influence as has been felt by the newly formed American Honey Institute, will have the result of at least encouraging the producer to the point where he is not ready to sacrifice his crop.



## CLASSIFIED DEPARTMENT

Advertisements in this department will be inserted for 7c per word, with no discounts. No classified advertisements accepted for less than 49c. Court each initial or number as one word.

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

As a measure of protection to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisements of used beekeeping equipment or of bees on combs must be accompanied by a guarantee that the material is free from disease or be accompanied either by a certificate of inspection from an authorized inspector or agreement made to furnish such certificate at the time of sale.

## BEES AND QUEENS

**NORTHERN** queens, three-banded, leather-colored Italians. Untested, \$1.00; twenty or more, 90 cents each.

Hopkins Apiaries, Withrow, Minn.

If you want bees that are gentle to handle, good honey gatherers and beautiful to look at, my strain of golden Italians will please you. Prices: Untested, \$1.00; 6, \$5.25; 12 to 49, 75c each; 50 or more, 70c each. Health certificate, safe arrival and satisfaction.

Hazel V. Bonkemeyer,  
R. 2, Randleman, N. C.

**BRIGHT**, three-banded Italian queens, every one a beauty, balance of season, 50 cents each. Prompt shipments, satisfaction guaranteed. Taylor Apiaries, Luverne, Ala.

**"PRODUCTION-BRED"** three-banded Italian queens that will produce real workers. Select untested, 80c each; 6, \$4.50; 12, \$9.00; 50, \$35.00; 100, \$60.00. Virgin queens 50c each. Satisfaction guaranteed.

A. E. Crandall, Berlin, Conn.

**GOLDEN** Italian queens, the big, bright, hustling kind (the kind that will please you). Untested, balance of season, 75 cents each. Tested, \$1.25; 100, \$60.00.

E. F. Day, Honoraville, Ala.

**ITALIAN QUEENS**—Select untested, 65c each; twelve or more, \$7.00 per dozen. The Mangham Apiary Co., C. S. Duncan, Mangham, La.

**SOME** of the best queens that are raised, 75c each, \$8.00 per dozen, as long as they last.

Graydon Bros.,  
R. 4, Greenville, Ala.

**YOUNG** laying three-banded Italian queens. By return mail, untested, one to ten, \$1.00 each; ten or over, 90c each. Tested, \$2.00 each.

The Goble Apiaries, Bussey, Iowa.

**GOLDEN** and three-banded queens that produce bees true to stock. Reared under conditions that make for hardiness and full development. One, 90c; six to twelve at 75c each. Discounts on quantities. Satisfaction guaranteed.

Moncla Bros., Moncla, La.

**QUEENS** for the balance of the season, quality equal to the best. Write and get prices. O. P. Hendrix, West Point, Miss.

**FOR SALE**—Northern bred Italian queens, 75c each. Breeders \$5.00 each. Benson Bee Line Co., R. F. D. 1, Galena, Ill.

**RUSCHILL'S** IOBRED Italian queens produce light-colored, three-banded bees that are real honey getters. Untested queens, \$1.00 each. Chas. L. Ruschill, Colfax, Iowa.

**GOLDEN ITALIAN** queens that produce golden bees. Very gentle, good honey gatherers. State inspected. Safe arrival, satisfaction guaranteed. Untested, \$1.00; six for \$5.40; twelve or more, 80c each. Tested, \$1.50. Select tested, \$2.50.

D. T. Gaster, R. 2, Randleman, N. C.

**FOR SALE**—Italian queens. Untested: 1 to 10, \$1.00 each; 11 to 25, 85c each; more than 25, 75c each. Tested, \$1.50 each. Satisfaction guaranteed. Ready to ship June 1 to June 10. R. B. Grout, Jamaica, Vt.

**WILLIAMS' ITALIAN** queens of quality will produce a honey crop for you. They have headed big producing colonies for your neighbor. "Ask the man who owns one." Satisfaction guaranteed. Select untested, 60c each; ten or more, 50c each. Health certificate with every shipment. Seventeen years' beekeeping experience.

P. M. Williams, Mt. Willing, Ala.

**LATHAM'S** "She-suits-me" three-banded untested Italian queens, \$1.50 by return mail. If ordered four weeks in advance, six queens for \$5.00, twelve for \$10, 50 for \$40, 100 for \$75.

Allen Latham, Norwichtown, Conn.

**THRIFTY** Caucasians of 14 years' selecting. Tested queen, \$2.00; untested, \$1.00. Safe arrival guaranteed. State inspected.

Peter Schaffhauser, Havelock, N. C.

**FOR SALE**—Choice bright Italian queens. I have been building up this strain for 25 years for hustlers, good winterers, gentleness, and fine color. Health certificate furnished. Prices: Untested queen, \$1.25; dozen, \$12.00. Breeder, \$10.00. After September 1, \$10.00 per dozen. Emil W. Gutekunst, Colden, Erie Co., N. Y.

**PURE ITALIAN QUEENS**—Untested, \$1.00; tested, \$1.50. Two-pound package, \$3.00. Add price of queen wanted. Safe arrival guaranteed after May 10. Forty years' experience breeding and shipping bees and queens. Birdie M. Hartle, 924 Pleasant St., Reynoldsville, Pa.

**FOR SALE**—Golden Italian queens, \$1.00. Bright yellow bees; splendid honey gatherers. Cap honey a beautiful white. Once a customer, always one. Queens ready to mail May 20.

J. F. Michael, R. 1, Winchester, Ind.

**DON'T GUESS**—Be sure every queen you buy will arrive safely, be purely mated and give one full year's satisfactory service or be replaced free. That's our guarantee to you. Holloway Apiaries, Marietta, Okla.

**SIMMONS** Italian queens for quality and service. One, \$1.25; six, \$7.00. Also nuclei. Fairmount Apiary, Livingston, N. Y.

**THRIFTY** Caucasian queens from daughters of imported mothers. After April 15: One, \$1.50; twelve, \$14.00. Safe arrival. Tillery Bros., Greenville, Ala., R. 6, U. S. A.

**LISTEN**—If you wish to purchase high grade Italian queens, write for circular describing our famous Carolina queens. Every queen guaranteed to give satisfaction. One to five, \$1.00 each; six to twenty-four, 85c; twenty-five to fifty, 75c. Carolina Bee Co., W. O. Curtis, Mgr., Graham, N. C.

**GOLDEN UNTESTED QUEENS**—Gentle and good honey gatherers as can be found, \$2.00 each. Tested, \$4.00 each. Best breeders, \$20.00. Over thirty years a golden Italian breeder.

J. B. Brockwell, Barnetts, Va.

**LEATHER COLORED ITALIAN QUEENS**—\$2.00; after June 1, \$1.00. Tested, \$2.00.

A. W. Yates,  
15 Chapman St., Hartford, Conn.

**HIGHEST** grade Italian queens—Tested, \$1.50; untested, 75 cents. Package bees, one pound, \$1.50; two pounds, \$2.50; three pounds, \$3.25. Have had no disease. State inspection certificate with each shipment. Safe delivery guaranteed.

T. L. Davis, Buffalo, Leon Co., Texas.

**GOLDEN THREE-BANDED** and Carniolan queens. Tested, \$1.00; untested, 75c each. Bees in 1-pound package, \$1.50; 2 pounds, \$2.50; 3 pounds, \$3.25. Safe delivery guaranteed. C. B. Bankston, Box 65, Buffalo, Leon Co., Texas.

## FOR SALE

**FIND HONEY**—Use my bee scent and find three trees in one afternoon. One man did.

Will Grover, Bristol, Vt.

**FOR SALE**—Lewis wax press, used one day, \$10.00. Reason for selling, getting a larger press.

Newman I. Lyle, Sheldon, Iowa.

**FOR SALE**—Used 10-frame Root equipment, disease free and in excellent condition; 50 hive bodies with drawn combs, 25 hive bodies with frames; 50 4¼x4¼ plain supers, holders and fences; 30 queen excluders; 1 2-frame Root extractor, like new; 1 Root 140-gal. honey tank, 2 Root uncapping knives, 1 Root uncapping table, hive stands for 50 colonies (home made). This equipment is for sale part or all.

Harry Cramer, Red Cloud, Neb.

**TEN-ACRE** farm, outfit for 150 colonies. Elias Fox, Union Center, Wis.

**TEN** Modified Dadant hives with supers, good condition, drawn combs. No disease. James Andrews, Oriskany, N. Y., R. 1, Box 8.

**APIARY** and fifty stands of bees, buildings and all equipment for \$300.00. Reason for selling, poor health. Write me.

L. M. Simms, Roundup, Mont.

**THREE HUNDRED** acres well improved. Victoria loam; produce all crops, figs. Cement highway. Write for terms and prices. Just a few minutes' auto drive from Houston, Texas.

J. P. Hoyt, Estherwood, La.

**SEND** for list of used extracting equipment. A complete outfit, including unused cans and jars. No disease.

L. C. Worth, Lillbourn, Mo.

**FOR SALE**—Lewis extractor, No. 17; baskets for M. D. frames. Used for one ton of honey. Best offer takes it, f. o. b. West Allis, Wis. Joseph J. Pierron, West Allis, Wis., R. 4.

**FOR SALE**—One Root automatic power extractor, four-frame, 12-inch pockets, friction drive with brake; in good condition, only used three seasons; \$75.00. One 1½-h. p. McCormick Deering gas engine with magneto, as good as new, in first-class shape, \$40.00. One ¾-inch honey pump, new three years ago, complete with all fittings to attach to extractor, \$16.00.

Silsbee Apiaries, Bath, N. Y.

**EIGHT-FRAME** Markle honey extractor, in first-class condition; has extracted only thirty tons of honey. Apply S. P. Hodgson & Sons, New Westminster, British Columbia, Canada.

**FOR SALE**—Foundation, bee brushes, comb honey cartons, feeders, nailed and painted bodies, bottoms, covers and bodies, veils, sections, a big assortment of frames, excluders, comb and extracting supers k. d., and many other items in good usable condition. Reason for selling items, no longer listed in our catalog. Prices the lowest anywhere for the value. You can address G. B. Lewis Co. at Watertown, Wis.; Albany, N. Y.; Lynchburg, Va.; Texarkana, Ark., or Sioux City, Iowa.

**FOR SALE**—We are constantly accumulating bee supplies, slightly shopworn, odd sized, surpluses, etc., which we desire to dispose of and on which we can quote you bargain prices. Write for complete list of our bargain material. We can save you money on items you may desire from it.

Dadant & Sons, Hamilton, Illinois.

## HONEY AND BEESWAX

**WANTED**—White honey, some basswood. Send sample and price. J. K. Wolosevich, 2516 Archer Ave., Chicago, Ill.

**EXTRACTED** Tupelo, the world's greatest honey; never granulates; rich, deliciously flavored. In 32-gal. barrels, one to carlots. Sample, 20c. One-half gallon delivered, \$1.85; one gallon, \$3.55.

M. L. Nisbet & Bro., Bainbridge, Ga.

**WANTED**, for immediate shipment, white sweet clover extracted honey, up to 100 cans. Send sample and price.

A. V. Small, Augusta, Kansas.

**NEW** crop shallow frame comb honey, also section honey; nice, white stock, securely packed. Available for shipment July 15. The Colorado Honey Producers' Association, Denver, Colo.

**WANTED**—Fancy, new, clover comb honey. Give full particulars.

Ellsworth A. Meineke,  
Arlington Heights, Ill.



**FOR SALE**—White clover honey in 60-lb. cans at 9c per pound.  
Joseph H. Hoehn, Ottoville, Ohio.

**AMBER** colored honey. Extracted. Arthur Beals, Oto, Iowa.

**FANCY** white clover extracted honey, any sizes. Prices and samples on request. Kalona Honey Company, Kalona, Iowa.

**FOR SALE**—White comb honey, fancy and No. 1 grades, Wisconsin and Illinois stock. Write for prices. A. I. Root Company of Chicago, 224 W. Huron St., Chicago, Ill.

**PARTIES** wishing extra fine honey reasonable, any time, write Lee Horning, a Producer, Morrison, Ill.

**HONEY** wanted. Always in the market. Any quantity, any grade; extracted or comb. We pay cash. Hoffman & Hauck, Inc., Ozone Park, N. Y.

**HONEY** (comb and extracted), pure maple syrup, maple sugar and sorghum molasses. Special price to quantity buyers. C. J. Morrison, South Bend, Ind, 1235 Lincoln Way West.

**STURDEVANT**, St. Paul, Nebraska. Finest quality clover honey.

**WHITE CLOVER HONEY**—Extracted, comb and chunk honey. Prices on request. Sample 15c.  
F. W. Summerfield, Waterville, O.

**WANTED**—A car or less quantity of white honey in 60-lb. cans. Mail sample and quote lowest cash price for same.  
J. S. Bulkley, Birmingham, Mich.

**FOR SALE**—White clover honey in 60-lb. cans. None finer. Satisfaction guaranteed.  
J. F. Moore, Tiffin, Ohio.

**FANCY** white tupelo extracted and bulk comb, packed in five-pound tin.  
J. L. Morgan, Tupelo Apiaries, Apalachicola, Fla.

**FOR SALE**—Northern white, extracted and comb honey.  
M. W. Cousineau, Moorhead, Minn.

**HONEY FOR SALE**—Any kind, any quantity.  
The John G. Paton Co., 217 Broadway, New York.

**HONEY FOR SALE**—In 60-lb. tins. White clover at 12c lb.; white sage at 12c lb.; white orange at 14c lb.; extra L. A. sage at 11c lb.; Hoffman & Hauck, Inc., Ozone Park, New York.

**FOR SALE**—Our own crop white clover and amber fall honey in barrels and cans. State quantity wanted and we will quote prices. Samples on request.  
Dadant & Sons, Hamilton, Illinois.

**SHALLOW** frame white comb honey and white extracted honey.  
The Colorado Honey Prod. Ass'n, Denver, Colo.

### SUPPLIES

**BEST QUALITY** bee supplies, attractive prices, prompt shipment. Illustrated catalog on request. We buy beeswax at all times and remit promptly.  
The Colorado Honey Producers' Ass'n, Denver, Colo.

**"BEEWARE"** and Dadant's Wired Foundation for the Northwest. Catalog prices. F. O. B. Fromberg, Montana. Beeswax wanted. Write for prices.  
B. F. Smith, Jr., Fromberg, Mont.

**FOR SALE**—Good second-hand 60-lb. cans, two cans to a case, boxed. We have large stocks of these on hand. Please write for prices if interested. We are offering only good cans and good cases.  
C. H. W. Weber & Co., Cincinnati, O.

### MISCELLANEOUS

**MAKE** queen introduction sure. One Safin cage by mail, 25c; 5 for \$1.00.  
Allen Latham, Norwichtown, Conn.

**HAVE YOU** any Bee Journals or bee books published previous to 1900 you wish to dispose of? If so send us a list.  
American Bee Journal, Hamilton, Ill.

**THE DADANT SYSTEM IN ITALIAN**—The "Dadant System of Beekeeping" is now published in Italian, "Il Sistema d'Apicoltura Dadant." Send orders to the American Bee Journal. Price \$1.00.

**YOU** can read in either English or French the report of the Seventh International Congress of Beekeepers held at Quebec September 1-4, 1924. Not more than a dozen copies left. Orders filled in rotation. Postpaid, \$2.25. American Bee Journal.

**GLEANINGS IN BEE CULTURE**, published at Medina, Ohio, is the most carefully edited bee journal in the world. Its editor-in-chief is George S. Demuth. Its field editor is E. R. Root. Ask for sample copy.

**WESTERN HONEY BEE**, 2823 E. 4th St., Los Angeles, Calif., published by Western beekeepers, where commercial honey production is farther advanced than in any other section of the world. \$1.00 per year. Send for sample copy.

### WANTED

**WANTED**—Strong young man of good habits, with experience, for apiary work and honey sales.  
John Kneser, Hales Corners, Wis.

**WANTED**—Hand extractor and equipment. Describe in first letter.  
G. Fjirstad, Ogilvie, Minn.

**COMPETENT BEE MAN**, capable of taking charge of 1000 swarms of bees located in several outapiaries if necessary. Excellent opportunity for the right man. State experience and wages. Year round position.  
J. E. Crane & Son Middlebury, Vt.

**WANTED**—Shipments of old comb and cappings for rendering. We pay the highest cash and trade prices, charging but 5c a pound for wax rendering.  
Fred W. Muth Co., 204 Walnut St., Cincinnati, Ohio.

### RABBITS

**RABBITS**—Make big profits with Chinchilla rabbits. Real money makers. Write for facts. 824 Conrad's Ranch, Denver, Colo.

### Dishes that Are Different

**EVERY** hostess is pleased when she serves a food that is new to her guests and they inquire, "How do you make this delicious dessert?" or whatever it may happen to be. If your guests are not accustomed to using honey in their cooking, you may be able to help friend husband to dispose of some of his surplus crop by serving some of the following dishes when "company is there" and afterward giving the recipe to your guests:

#### New England Indian Pudding

1 quart milk  
½ cup corn meal  
Two-thirds cup Honey  
1 teaspoon salt  
1 teaspoon ginger or cinnamon  
¼ cup raisins  
1 cup cold milk

Add meal to one quart of cold milk

and stir while heating until mixture thickens. Take from stove and add honey, salt, spices and raisins. Put in baking dish and add one cup milk. Bake in a slow oven two hours, stirring once or twice while baking. Serve hot with cream.

#### Honey Sweet Potatoes

Pare raw sweet potatoes and cut in lengthwise slices about one-half inch thick. Put in frying pan with water to nearly cover. Add a generous portion of honey and dot over with pieces of butter; add a little salt. Cover and cook until the potatoes are tender and water and honey have cooked to a thick syrup. Turn potatoes once or twice while cooking.

#### Baked Pears

Cut hard winter pears in cubes and place in a casserole. Drizzle honey over pears and cook in covered dish in slow oven until tender.

#### Fudge

2 cups sugar  
½ cup milk  
2 squares chocolate  
¼ cup honey.  
1 tablespoon butter  
1 teaspoon vanilla

Cook sugar, milk and chocolate about three minutes, then add honey and cook until a little dropped in cold water forms a soft ball. Take from stove and add butter and vanilla, but do not stir. Set away to cool, when cold, beat until it thickens. Pour in pan to harden and cut in squares.

One favorite with both hostess and guests is Miss Fischer's nut bread. The hostess likes it because it is **better** if prepared a day or two before it is served, and the guests like it because it is so delicious.

#### Honey Nut Brown Bread

(From Honey Way Menus)

1½ cups graham flour  
1½ cups white flour  
1 cup raisins  
1 cup chopped walnut meats  
1 teaspoon soda  
1 egg  
1 cup Honey  
1 tablespoon shortening  
1 teaspoon salt  
1 cup buttermilk

Sift the two flours. To the well beaten egg, add honey and shortening, which have first been slightly warmed and blended. Add salt, all the buttermilk except enough in which to dissolve soda. Stir in sifted flour, raisins and chopped nut meats. Add dissolved soda. Bake in slow oven one hour. Enough for two medium sized loaves.



(Continued from page 361)

big wind-up meeting will be held at the Shoff Brothers' apiary near Peoria at the close of the tour.

Complete details as to speakers and stops will be given in the July issue of the monthly bulletin of the Illinois State Beekeepers' Association. Those who are not members, but are interested, may secure a copy of the complete program by addressing a request to the Secretary, Illinois State Beekeepers' Association, Vivarium Building, Champaign, Illinois.

#### Southern Series of Summer Meetings

We have just received from the southern officials a list of southern meetings which are to be held in succession, with the Southern States Conference at Texarkana.

The series as now planned, with meeting places so far scheduled, is as follows: Missouri, Columbia, July 16-18; Arkansas, Little Rock, July 20-21; Mississippi, A. and M. College, July 23; Louisiana, Baton Rouge, July 25-26; Texas, College Station, July 31, August 1; Oklahoma, August 3-4; Southern States Conference, Texarkana, August 6-7.

An effort is being made to have outside speakers take in the series of meetings, which is so arranged as to enable speakers to go from one to another without loss of time.

#### Kansas Summer Meeting

The Kansas Beekeepers' Association held the annual meeting at the home of E. F. Dean at Topeka on May 27. This was the twenty-seventh annual gathering and combined a picnic and outing with a program of addresses. The speakers were J. F. Diemer of Liberty, Missouri, R. L. Parker, State Apiarist, and Frank C. Pellett of the American Bee Journal.

The day was fine and the bees in the Dean apiary were busy storing honey from white clover. The ladies served a delightful basket lunch which was much appreciated by hungry men. Altogether it was a very happy occasion.

All of the officers were reelected without change. There was a long discussion of marketing conditions and plans were laid for special displays at the state fair.

The increasing popularity of sweet clover as a farm crop is making much new bee pasture in many Kansas neighborhoods and the number of commercial beekeepers is increasing.

President O. A. Keene and Secretary George Pratt spent the following day showing visitors about the country and giving them a view of Kansas beekeeping.

#### Nature and the Drone

By W. A. Allison

I have just read in the April American Bee Journal a well written short article, "What Is a Drone?" by E. F. Hemming. In this article the author takes up and refutes several suggestions as to the reason for the production of so many drones in a colony of bees. The following article is a result and, in a way, a continuance of that one:

In all plant and animal life nature is lavish in her production of individuals that the race may survive. This is especially true of the lower forms of life. In trees thousands of seeds are produced for each one that sprouts, and thousands of seeds sprout that never reach maturity. The reproduction of fish furnishes a like example. In the higher forms of life, and in a few of the lower forms, fewer individuals are produced, but more care is given to those individuals to see that they reach maturity. And so, since the

very life of the colony of bees depends on the sure fertilization of the queen, it seems that nature is taking no chance that this shall not be done, and hence her prodigal production of drones.

Of course, in most forms of animal life the male is of use to the species in other ways than reproduction, which seems to be the sole object in the production of drones. With pigeons, for instance, the male acts as a protector, helps build the nest, helps incubate the eggs, and finally helps feed the young. Many similar instances, which need not be mentioned, come to mind at once. Because of the drones' size and the amount of time at their disposal, one sometimes wonders why they, instead of the workers, were not given the sting and the duty of protecting the hive. However, as it is, the drones can be and are dispensed with at certain seasons of the year, and I suppose that is the better way.

In this production of an excess of males, it seems that the beekeeper is more fortunate than the producer of many other kinds of animals, for nature in the production of most animals produces an equal number of males and females. The poultry man, for instance, must raise a male for each female and, in most cases, raise the excess males at a loss, as does the beekeeper. On the other hand, in some kinds of animal husbandry males are more desirable than females, as in the production of fat cattle for market. But until we learn the secret of the control of sex, we shall have to use, to the best of our ability, what nature gives us.

#### QUEENS ITALIANS (three-banded)

**50c**

SATISFACTION GUARANTEED

W. A. WHITMIRE, Milton, Fla.

#### LEININGER'S STRAIN OF ITALIANS

BRED FOR BUSINESS

Beginning June 1, we will sell queens from this famous strain at the following prices. 1 to 5, \$1.00 each; 6, \$5.50; 12, \$10.50; 100, \$85.00. Tested, \$1.50. Breeders, \$10.00 each.

FRED LEININGER & SON, Delphos, Ohio

#### 50c--HUMMER GOLD STAR QUEENS--50c

Not Goldens but the best light colored three band Italians we are able to develop. Any number from one to 1000. Requeen with this strain and note the better results.

**GEO. A. HUMMER AND SON**  
PRAIRIE POINT, MISS.

#### Choose Labels Wisely

You Can't Go Wrong with A-B-J Labels

They sell honey and are priced right.  
Send for complete catalog

AMERICAN BEE JOURNAL  
HAMILTON, ILL.

#### THREE BAND ITALIAN QUEENS

75c Each, \$8.00 Per Dozen

Satisfaction guaranteed

D. C. JACKSON, Rt. 1, Moultrie, Georgia



## Foreign Notes

In the "Bulletin of Apiculture Des Alpes Maritimes," Mr. Baldensperger gives a very interesting account of his experiences in beekeeping in Palestine, where he was born. He learned progressive beekeeping from D. A. Jones and Frank Benton, who came to Palestine, Cyprus Island, and Egypt for bees, in 1880. He tells how he bought colonies of bees from the natives, in earthen hives, transferred them to movable frames and kept them in apiaries located at different spots, according to the flora. He and his five brothers transported hundreds of colonies in sacks, on camel back, first in March, to the orange groves, then later in the plains to the acacias and vitex, then late in the season to the wild thyme in the mountains. Their work, with hired help of half a dozen different tribes, men who barely understood one another, was interesting in the extreme.

### The Nosema Apis in Switzerland

The "Bulletin d'Apiculture" of Switzerland mentions the Nosema as quite injurious to apiaries in that country. For treatment they prepare a tea of gentian roots, made by crushing the roots and boiling about a half ounce in two and one-half gallons of water. This tea is used to prepare a syrup for bee food. A preparation made with Glauber salt mixed with the food of the bees caused a large mortality among the bees of an apiary, so they warn beekeepers against the free use of salt in bee feed for winter.

### Foulbrood From the City Dump

In the "Western Honey Bee" Mr. W. G. Watkins tells how he traced two of his strongest colonies of bees to the city dump at Berkeley and how those two colonies proved diseased with foulbrood the following season. Empty honey cans and jars are thrown away while sticky with honey, and the bees gather this honey and occasionally bring home the disease. As long as foulbrood is rampant in the country, such occurrences are possible.

## He Approves

Every beekeeper should read that article, "Who Is Average," in the editorial, page 173, April number of this Journal.

It seems to me that Mr. Pellett hit the nail on the head several times in this article.

I can't see why so many get the idea that all they need is a few new laws.

I honestly believe that cheap honey is here for a while and the only way beekeepers can survive will be by hard labor and lowering the production cost to the lowest possible point.

Will Groom, Missouri.

## GET RUNNING'S QUEENS AND GET HONEY

### THEY SATISFY!

The kind we use in our extensive Michigan Apiaries, where we produced 92 TONS of honey last season.

Choice Untested Italian Queens  
75c each

Tested, 50c each extra

Write for prices in large quantities.  
All queens sent from Sumterville, Ala.  
Address for QUICK service,

**DAVID RUNNING**  
Sumterville, Alabama

## Bee Men that Sailed the Seven Seas

Not more than a dozen copies left. The Seventh Report of International Congress of Beekeepers

Quebec, September 1-4, 1924

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English and French  
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**American Bee Journal**  
Hamilton, Illinois

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We specialize in Ruddy Manufacturing Co.'s Bee Ware. The material is specially selected lumber scientifically cured and air dried to ensure the least possible variation of shrinkage or expansion under our severe weather conditions. All work is properly spaced and jointed to give that uniformity, accuracy and smoothness of finish unobtainable with home-made or ordinary planing mill products.

### Get Your Supplies Early

Langstroth Hives, Extracting and Comb Honey Supers, Honey Extractors, Feeders, Foundation (Aircor and Dadant's Wired), Queen and Drone Traps, Smokers, Honey Knives, etc. Special Prices on Large Quantities.

Write for full particulars  
of Stock Handled.

**STEELE, BRIGGS SEED CO., Limited**  
Regina, Sask. and Winnipeg, Man.

## OUTAPIARIES

By M. G. Dadant.

Covers equipment, management  
and locations.

110 pages, 60 illustrations.

Price \$1.00, postpaid.

**American Bee Journal**  
Hamilton, Illinois

## QUEENS! QUEENS!!

Palmetto Italian Queens have a record of 400 sections of comb honey per colony. The Queens are right and the prices are right. Booking June, July and August orders at following prices: One Queen 50c; half dozen, \$2.80; dozen, \$5.40; thirteen to 100 40c each.

**C. G. ELLISON, Belton, S. C.**

ITALIAN BEES THAT PLEASE

**Reacraft**

Select queens, \$1.00; Dozen, \$11.00. See June issue for details. Write for circular.

**GEORGE H. REA, Reynoldsville, Pa.**

## Diemer's Three Banded Bright Italian Queens

Before June 15, Select Untested, any number, \$1.20 each. Tested, \$2.00.

After June 15, Select Untested:

4 or less, \$1.00 each  
5 to 10, 90c each  
11 to 20, 85c each  
21 to 50, 80c each  
61 to 100 or more, 75c each  
Tested, \$1.50

Package bees, prepaid to fourth zone:  
3 pounds with queen, \$5.00  
2 pounds with queen, \$4.00

After June 15, 10 per cent less

Queens sent in introducing cages.  
Write for circular giving principle of queen introduction.

Prompt service and a square deal

**J. F. DIEMER, Liberty, Mo.**

## OLD RELIABLE

Mondeng for Hives, Supers,  
Sections, Frames

and all other bee supplies at  
factory prices. Send in your  
list now for special quoting if  
you want to save money.

**Charles Mondeng  
Company**

159 Cedar Lake Road  
Minneapolis, Minnesota



**QUEENS****ONE \$1.00; 12 FOR \$9.00; 100 FOR \$75.00**

Breeding Queens, none better, \$5.00 each. Service guaranteed for one season.

I challenge the world to produce better bees than I offer. Safe arrival, prompt delivery and satisfaction. 38 years serving my beekeeping friends. Not a displeased customer that I know of.

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Government tests prove to be the "Best by Test Kind." Made of pure Beeswax. Perfect refining and milling. Thirty-five years' experience. Satisfaction guaranteed.

Other supplies manufactured. Best goods at lowest prices  
Send for Catalogue

**W. A. CHRYSLER & SON, Chatham, Ont.****SMITH'S SUPERIOR THREE BANDED QUEENS***Cheap In Price But High In Quality*

The best queens ten years of experience can produce. We ship only the BEST, as it means the success of your honey crop. We guarantee every queen we ship; she must be well shaped, thrifty, and of pretty color. We have never had any disease, although our bees are state inspected, and health certificate goes with each shipment. Order direct from this ad and we assure you that our QUEENS and SERVICE will be all you expect.

**PRICES FOR BALANCE OF SEASON**

Select Untested - 1-9, 60c; 10-100, 55c; 100 up 50c each. Tested Queens 50c more each

**N. B. SMITH & COMPANY**  
**CALHOUN, ALABAMA**

**SUCCESSOR TO**  
**W. C. SMITH & CO.**

**Beekeepers Take Notice**

For thirty years we have specialized in the manufacture of **Sections** from the whitest selected Wisconsin basswood

We also manufacture hives, supers, frames and shipping cases

*Write for our free illustrated catalog*

**Marshfield Manufacturing Company**  
Marshfield, Wisconsin

**Heavy Shipment of Bees into Utah**

Fooling the busy bee to make her busier has become quite a popular pastime among California and Utah apiarists, if the heavy bee shipments which have been coming into this state for the season's alfalfa bloom are any criterion.

D. H. Hillman, State Apiarist, reports that the incoming shipments this year have been unusually heavy. Twenty-two carloads have already been received here, he said, and indications are that many more will come in the near future.

A deluge of honeybees shipped from southern California points is scheduled to arrive here in the near future. Four carloads were sent to Beaver county, four went to Cache county, and others to Delta, in Millard county. Seven thousand colonies were represented in the total shipment, Mr. Hillman said.

The bees are better producers in warmer climes, according to the State Apiarist, hence their shipment to California during the winter months and return to Utah in the summer.

Mr. Hillman says that thirty carloads will be shipped into the state during the current month of June. These will be allowed to forage here until next December, when they will be returned to California to aid in pollenizing the orange crop and also to gather the nectar flow from the orange blossoms.

Shipments are heavier this year than ever before, due to the failure of the honeyflow from the sage in southern California. A large yield was gathered from the orange blossoms, it is said, but this season has now passed, the inspector announced.

California bee men received a fair crop of honey from the orange bloom in their state, but other honey plants in southern California are not secreting nectar this spring, owing to the dry weather in that section.

Hence the Utah migration, the weather having led the apiarists of the coast state to seek other fields for their colonies.

Conditions in Utah are reported favorable for a good honey crop this year. Glen Perrins.

**Experiments with Nectar Analysis**

We have before us the annual report of the Agricultural Experiment Station at the University of California.

Those westerners are alive to diversification in agriculture, and to the importance of experimental work allied with practical agriculture.

In the course of the report is a resume of George H. Vansell on the



chemical composition of nectar, worked out in conjunction with the chemical department. The use of cuprous oxide-potassium permanganate method for the determination of free sugar has been good. Numerous hand-collected nectars were studied.

The report says:

"The old idea that nectar was largely sucrose, and that the bee inverted it to levulose and dextrose, is not wholly true. Certain nectars show almost equal amounts of sucrose and invert sugars. The sucrose content of honey is low, hence some inversion is accomplished during the honey-making process. The amounts of nectar available and the proportion of constituents varies sharply from day to day with weather changes, as, for example, the amount of invert sugar in the nectar from eucalyptus ranged from 6.47 per cent to 9.92 per cent over a period of five days. The water content increases rapidly during the humid periods."

### Backward Season in South

Mr. Ray Hutson, assistant entomologist, New Jersey Agricultural Experiment Station, New Brunswick, on his return from a trip in Alabama and Louisiana, writes that the season is somewhat late down there and that there might be some delay in shipment of package bees, although the opinion was that most orders would be gotten out on time. The number of complaints coming in here, however, have been relatively small concerning late shipment of packages.

He also says concerning New Jersey:

"Bees have wintered very well in Jersey, if we look at it from the standpoint of actual loss of colonies. However, we have had a rather early start in brooding, and I anticipate that the heavy drain on stores from this cause will result in some loss at harvest time."

### Dadant Works in Spanish

This office is just in receipt of copies of Spanish editions of C. P. Dadant's book, "Dadant System of Beekeeping" (El Metodo Dadant en Apicultura), and "First Lessons in Beekeeping" (Primeras Lecciones de Apicultura).

These are the first editions in Spanish of these two volumes and are published by Gustavo Gili, Barcelona, Spain.

The price of the "Dadant System" is \$1.00, and "First Lessons" \$1.20, postpaid. Copies may be obtained either directly from the publisher or from the American Bee Journal office.

## Morrison's Three Banded Italian Queens

If you want Italian queens with years of selection and breeding back of them for qualities such as gentleness, honey gathering, less inclined to swarm, and capping their honey white, requeen with Morrison's Line Bred Stock. We have the stock and know the business.

Prices are as follows: 1 (one) \$1.00; 6 (six) \$5.50; 12 (twelve) \$10.00; 25 or more, 80c each. Tested, \$1.50 each, in any number. Breeders, \$5.00 and \$7.50 each.

Safe arrival and perfect satisfaction guaranteed

**GEO. MORRISON, P. O. Box 65, Mandale, Ohio**

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### CANADIAN MADE HONEY KNIVES



**The Hardie Steam Heated Knife, Patented U. S. and Canada,** is the newest and the best. Removable, cleanable copper tubing. The steam passes through the handle and the rubber hose and drip cord are behind and out of the way of the uncapper. 11 inch and 13 1/2 inch blades.

Large capacity steamers with single or double attachments and shut off valve.

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**RUDDY MANUFACTURING CO., Ltd.**  
BRANTFORD, Ontario, Canada

## JENSEN'S QUEENS

Any number **50c each** Balance of Season

At this low price can you afford to tolerate a single inferior queen in your apiaries? Neither can you afford to rear them.

**WE GUARANTEE:** Best Three-banded Italian stock. Absolute freedom from disease. Pure mating of all queens; replacement of any that prove otherwise. Safe arrival and satisfaction.

Queens arriving dead, or proving unsatisfactory after introduction, must be returned for credit. New queens or your money sent promptly and cheerfully.

**JENSEN'S APIARIES, Crawford, Miss.**

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"Canco" Cans and Pails

"Diamond I" Glass Jars

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Dadant's Wired Foundation

Write for 1928 Honey Container Price List  
and Bee Supply Catalog.

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OMAHA, NEBRASKA



**MOTTS' NORTHERN BRED ITALIAN QUEENS**

Reared second door from the postoffice. Save three days' confinement by R. F. D. and hot mail snaks from southern route. Queens selected, guaranteed to be purely mated. April and May, \$1.25 each, \$13.00 for twelve. After June 1, \$1.00 each; 24 at 95c, 50 at 90c, 100 at 85c each. Select tested, \$2.00. Breeders, \$5.00 up; virgins, 50c. See list. No disease. Safe delivery and satisfaction guaranteed.

E. E. MOTT & SON, Glenwood, Michigan

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American Cans and Pails, Glass Honey Jars, Wired Foundation Catalog for the asking

If you wish prompt service, write

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**SPEED PLUS QUALITY****FOR MISSOURI BEEKEEPERS**

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High Hill, Missouri

**35 STATES**

Were Stung with Howell's Queens in 1927

**TONS OF HONEY**

Good untested, one grade, 60c each  
100 for \$57.00

Tested, \$1.50 each  
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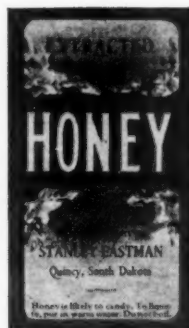
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American Bee Journal

Hamilton, Illinois

**An Appeal From Secretary Ormond**

Definite arrangements have been made for the 1928 convention of the American Honey Producers' League to meet at Sioux City, Iowa, January 31, February 1 and 2. I have attended a number of League meetings and as a beekeeper or honey producer the most disappointing thing to me was the few actual beekeepers present. It occurs to me that we beekeepers should take a more active interest in the doings of our national organization. I cannot refrain from referring to the fact that the American Honey Producers' League is an organization of, by and for its members, and its policies can be changed from time to time, and have been, and the changes as far as I know have been with the view of bettering conditions and making the League more useful. But the actual honey producers must affiliate with the League and attend its meetings and have a part in its doings.

On assuming the office as the Secretary-Treasurer, I was disappointed to know that so few beekeepers throughout the United States were members of the League compared to the number of beekeepers. This condition should not exist. If we are to put over the projects that must be put over for the industry of beekeeping, it will be necessary for us beekeepers to affiliate with the national organization, and I am pleading with the beekeepers of the United States to send \$1.50 to me, State Capitol, Little Rock, Arkansas, and become a member of the League for the year 1928.

The American Honey Producers' League wants to affiliate with the American Honey Institute. To do this it will cost \$250. They have kindly agreed to let us pay for this in four installments of \$62.50 each, because we do not have funds with which to pay this immediately. The beekeepers should be represented on the board of directors of this institution, and they should have a part in the work that the Institute will do, for the reason that everything it does will directly help the producers of honey, and I will assure you now that you will begin to feel the effects of this institution's work within twelve months.

Now, beekeepers, do your duty, whatever it may be. Let the American Honey Producers' League be your national organization and through your officers and directors take advantage of such opportunity as may present itself from time to time when the League is not in convention assembled.

J. V. Ormond, Secretary,  
Am. Honey Producers' League.



**BETTER BRED PURE ITALIAN QUEENS**

INTRODUCING **45c** EACH

Am selling my Queens at this price to let you know and see the quality. Try them. Satisfaction guaranteed. There has never been any disease here.

**CALVERT APIARIES**  
**A. L. WEBB, Prop.**  
CALVERT, ALA.

NEW BINGHAM  
BEE SMOKER



**FOR  
OVER  
50  
YEARS**

Beekeepers in many lands have been pleased with this most important tool in Beekeeping. Your Bingham Smoker is offered for sale by numerous dealers.

**TIN CONTAINERS**

When you are in the market for anything in Tin Cans or Pails, ask for our interesting prices, giving quantity wanted.

*Insist on the Best*

**A. G. WOODMAN CO.**  
Grand Rapids, Mich.

**HARDY NORTHERN QUEENS**

THREE BANDED ITALIANS ONLY

Daughters of first prize winners  
Michigan State Fair 1927

No 50c Queens Mated in Our Yards

**PRICES**

Untested, \$1.00; \$10.00 doz.; 100, \$75.00

Tested, \$2.50 each

**PONTIAC APIARIES**

AUBURN HEIGHTS, MICH.

**Caucasian Queens for July**

We offer select tested to prospective breeders at ----- one \$7.50  
Select tested ----- one 5.00  
Tested ----- one 3.00

Untested—  
One, \$1.50; six, \$8.00; twelve 15.00

Queens that we are offering are daughters and granddaughters from our direct imported breeders. They are typical Caucasians and are guaranteed to please.

**BOLLING BEE CO.**  
Bolling, Alabama

**GOLDEN ITALIAN QUEENS**

Only One Grade, Select. Safe Arrival and Satisfaction Guaranteed.  
Untested \$1.00; 6 for \$5.00; 12 for \$10.00

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**QUEENS of HIGHEST QUALITY**

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Prices: 1 to 4 inclusive, \$1.50 each; 5 to 9 inclusive, \$1.45 each; 10 to 24 inclusive, \$1.40 each; 25 to 49 inclusive, \$1.35 each; 50 to 74 inclusive, \$1.30 each; 75 to 99 inclusive, \$1.25 each; 100 or more, \$1.20 each. Breeders, \$10.00 each.

Write for our free book "About Bees."

**JAY SMITH, Route Three, Vincennes, Indiana**

**ACHORD QUEENS**

VIGOROUS YOUNG ITALIANS, BRED FOR SERVICE

They are reared in strong colonies and mated from strong nuclei. We can fill your order promptly.

Select young laying queens now 75c each; five or more, 70c each; twenty or more, 65c each. Tested queens, \$1.50 each

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Everyone of them carefully selected. Safe arrival and satisfaction guaranteed.  
1, 75c; 100, \$60.00. Certificate of inspection with every shipment.

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## YANCY HUSTLER QUEENS 50c each by the hundred

3-Band Italians. Only one grade: Select.

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### EXCELSIOR BEE VEIL

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EXPERIENCE WITH BEES

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Three-banded Italians

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Select Untested	1.10	12.00	95.00
Tested	1.60	17.50	130.00
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Day old queens 50c each			

We guarantee satisfaction and safe arrival in U. S. and Canada

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## Mack's Queens 3 BAND ITALIANS

Are Extra Hardy.

They are northern bred.

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They make rousing big colonies.

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Just talk to any one of MACK'S many customers and see what they tell you about them. If our queens, prices and service don't satisfy you its hardly worth while for any one else to try it. We are after satisfied customers and it takes GOOD QUEENS to win and hold them. If they satisfy us we know they will satisfy you.

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Without obligation on my part, please quote prices. I have \_\_\_\_\_ swarms.

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Now only 50c each

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These are not cheap Queens but the best that can be produced regardless of price.

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### LINE-BRED, THREE-BANDED, LEATHER-COLORED, ITALIANS

Bred for gentleness and good honey gathering qualities for 22 years. They have proven to stand the far northern climate, coming out with strong colonies in the spring.

#### PRICES:

1 select (one grade) young laying queen	\$1.00
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All queens guaranteed pure mated and to give satisfaction. Sent in large, six-hole cages unless smaller size specified. No charge for clipping. No disease. Health certificate. Immediate shipment. Safe arrival and satisfaction guaranteed.

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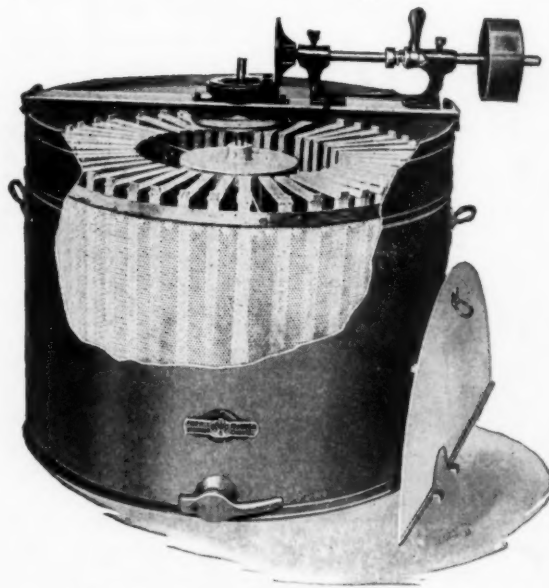
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